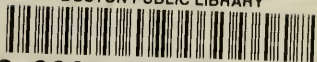


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ANNUAL REPORT  
OF THE  
HOSPITAL DEPARTMENT  
FOR THE YEAR ENDING DECEMBER 31, 1930.

REPORT OF THE TRUSTEES.

Boston, January 5, 1931.

HON. JAMES M. CURLEY,  
*Mayor of the City of Boston.*

SIR,— In compliance with the ordinances, the trustees of The Boston City Hospital present the following report of its condition for the year ending December 31, 1930.

This is the sixty-seventh annual report of the Hospital Department which consists of the Main Hospital, the South Department for contagious diseases, the Sanatorium Division, the Haymarket Square Relief Station, the East Boston Relief Station, the Convalescent Home in Dorchester and the West Department. The report of the Sanatorium Division is published in a separate volume.

The Board of Trustees was organized on May 14, 1930, by the election of Mr. Joseph P. Manning as president and Dr. Henry S. Rowen as secretary.

*Boston City Messenger*  
*July 14, 1939*

In May, Mr. Carl Dreyfus was reappointed to the Board of Trustees for the term ending April 30, 1935.

#### EXPENDITURES.

The total expenditures for all departments of the Hospital, excepting the Sanatorium Division, during the fiscal year were \$2,898,362.15. Of the total operating expenses \$2,172,178.35 was expended upon the hospital proper and its subdivisions; \$227,616.10 on account of the Out-Patient Department; \$327,376.09 on account of the South Department; \$92,819.30 on account of the Haymarket Square Relief Station; \$46,686.87 on account of the East Boston Relief Station; \$21,884.33 for the Convalescent Home and \$9,801.11 for the West Department. Of the amount spent on Pathological Laboratory, \$51,179.80, \$44,014.63 is included in the hospital proper expenditures, \$2,047.19 in the Out-Patient Department, and \$5,117.98 in the South Department expenditures. The entire amount spent on the Thorndike Memorial Laboratory, \$82,784.04, is included in the hospital proper expenditures. Of the total amount spent on the X-Ray and Photographic Department, \$85,790.42, \$44,611.02 is charged to the hospital proper and \$41,179.40 to the Out-Patient Department. Of the total amount spent on the Department of Physical Therapeutics, \$25,140.12, \$4,776.62 is charged to the hospital proper and \$20,363.50 to the Out-Patient Department. Of the amount spent on the Department of Immunology, \$6,006.07, \$240.24 is charged to the hospital proper and \$5,765.83 to the Out-Patient Department. Of the amount spent on the Clinical Laboratory, \$11,077.44, \$9,083.50 is charged to the hospital proper and \$1,993.94 to the Out-Patient Department. Of the amount spent on the Blood Laboratory, \$2,459.49, \$1,475.69 is charged to the hospital proper and \$983.80 to the Out-Patient Department. Of the amount spent on the Department of Oral Surgery, \$2,016.91, \$645.41 is charged to the hospital proper and \$1,371.50 to the Out-Patient Department. Of the amount spent on the Department of Social Work, \$26,826.87, \$13,413.44 is charged to the hospital proper, \$13,011.03 to the Out-Patient Department and \$402.40 to the South Department. Of the amount spent in ascertaining the settlement of patients, \$2,364.10, \$2,222.25 was spent on the hospital proper and \$141.85 on the South Department.

In Table No. 2 the expenditures on the hospital proper and the South Department are combined under the title "Main Hospital."

The methods of obtaining the per capita costs in the various departments are shown in Tables No. 1 and No. 2 of the Superintendent's report. From the total operating expenses are deducted the increase in stock on hand at the end of the year over that at the beginning of the year (or the decreases are added, as the case may require). There is also deducted the cost of permanent improvements and other extraordinary expenditures (construction of film storage building, painting Drown House; relocating and installing fire lines in Nurses' Home; installing fire escapes for Wards F, G and H; granolithic walk and catch-basins for Surgical and Maternity Buildings; iron netting on side and front of Burnham Building as protection against birds; boiler platforms and ladders in Power House; Blackburn-Smith feed water filter; light-proof room in Pathological Laboratory; lead X-ray booth; sheet shelving in place of wooden in a laboratory; electrocardiograph control conduits and wires to connect electrocardiograph system in Medical Building with recorder in Burnham Building; electric refrigerator for Diet Kitchen; new transportable electrocardiograph; lights in Surgical Research Laboratory; electricity in Convalescent Home; new water heater in Haymarket Square Relief Station; chain fence at West Department). This gives the amount properly chargeable to maintenance. This cost of maintenance is divided by the number of days' board given ward patients or the number of visits of out-patients, to obtain the per capita cost per patient.

The per capita cost at the hospital proper was \$5.64 per day for ward patients; at the South Department, \$4.96, but taking the hospital proper and the South Department together, the per capita cost per ward patient was \$5.54. At the Convalescent Home, the per capita cost per patient was \$3.83 per day. The cost of out-patients per visit was \$0.64 at the hospital proper, \$2.84 at the Haymarket Square Relief Station and \$1.31 at the East Boston Relief Station. The cost of uncooked food supplies for the hospital in all its departments has been \$4.80 per person per week or \$0.69 per day.

## PAYING PATIENTS.

During the past year there has been collected for the care and treatment of patients of all classes excepting those at the Sanatorium Division the sum of \$201,753.77, itemized as follows: There was received from the Commonwealth of Massachusetts for the board of patients at the hospital proper, \$27,304.95; from various cities and towns for hospital proper, \$20,745.48; collected at the Superintendent's Office, on account of private room, ward and Out-Patient Department paying patients, \$120,564; of which \$14,311.20 was from insurance cases; for board of paying patients at the South Department, \$4,758.07; on account of ward and Out-Patient Department paying patients at the Haymarket Square Relief Station, \$4,017.38, of which \$1,904.14 was from insurance cases; on account of ward and Out-Patient Department paying patients at the East Boston Relief Station, \$363.49, \$182.57 of this being from insurance cases. There was also collected in all departments, \$5,218.03 on account of insurance cases, \$1,746 of this being from X-ray cases, \$3,438.03 being from clinical record fees, and \$34 from physiotherapy cases.

There has also been collected for the hospital by the Health Department, for the care of contagious cases at the South Department, and paid to the City Collector the additional sum of \$18,782.37. \$95,524.84 of the income from paying patients was collected by the Overseers of the Public Welfare. The revenue was increased \$9,654.50 by X-ray charges; it was increased \$8,968.75 by physiotherapy charges. It was also increased \$44,542.07 by out-patient treatment, removal of tonsils and adenoids, electro-cardiograms, skin treatment, issuing of *ex-officio* statements, fees for insulin, gold sodium treatment, record fees and payment of nurses' board.

A table showing the revenue received from paying patients, interest on trust funds, sale of old material and other sources, will be found on page 5 of the Superintendent's report.

The following is a tabular statement of the income from paying patients:

	Hospital Proper.	South Department.	Haymarket Square Relief Station.	East Boston Relief Station.	All Departments.	Totals.
Collected at the Hospital:						
From the state.....	\$27,304 95					\$27,304 95
From cities and towns....	20,745 48					20,745 48
From ward and private room patients:						
Miscellaneous cases.....	89,707 55	\$4,758 07	\$1,821 24	\$174 92		96,461 78
X-ray cases.....	7,610 50		292 00	6 00		7,908 50
Physiotherapy cases.....	8,934 75					8,934 75
From insurance cases:						
House cases.....	13,861 20		284 14	4 57		14,149 91
Out-patient cases.....	450 00		1,620 00	178 00		2,248 00
X-ray cases.....					\$1,746 00	1,746 00
Record fees.....					3,438 03	3,438 03
Physiotherapy.....					34 00	34 00
Totals.....	\$168,614 43	\$4,758 07	\$4,017 38	\$363 49	\$5,218 03	\$182,971 40
Collected by City Collector for contagious cases.....		18,782 37				18,782 37
Totals.....	\$168,614 43	\$23,540 44	\$4,017 38	\$363 49	\$5,218 03	\$201,753 77

## HOSPITAL BUILDINGS, PLANS, ETC.

Two appropriations, each \$180,000, have been granted for plans, sketches, architects' fees, etc., for new buildings: The money expended from these appropriations has been used in connection with alterations to Nurses' Home, Power Plant and South Department, also for new Surgical Building, Maternity Building, House Officers' Building, Medical Pavilion and Administration Building.

A statement of this appropriation follows:

Original appropriation	\$180,000 00
Additional appropriation	180,000 00
	<hr/>
	\$360,000 00
Expended through December 31, 1930	219,380 75
	<hr/>
Balance on hand, January 1, 1931	<u>\$140,619 25</u>

## ADMINISTRATION BUILDING.

February 9, 1930 appropriation (inside debt limit)	\$210,000 00
February 9, 1930 appropriation (outside debt limit)	210,000 00
Appropriation	\$420,000 00
Expended through December 31, 1930	225,501 79
On hand January 1, 1931	<u>\$194,498 21</u>

Contract awarded to Matthew Cummings Company for erection and completion of Administration Building. This building is now well on the way to completion. Extension of time for completion has been granted to May 15, 1931.

## NEW ADMINISTRATION BUILDING, FURNISHING AND EQUIPPING.

On December 16, 1930, an appropriation of \$40,000 was granted for furnishing and equipping New Administration Building which doubtless will be opened in the spring. (No expenditures, 1930.)

## SOUTH DEPARTMENT BUILDING, REMODELING, ETC.

On February 5, 1930, an appropriation of \$80,000 was granted for miscellaneous alterations to South Department. On August 26, 1930, the contract for this work was awarded to John Bowen Company. It is expected that this contract will be completed in the early spring.

Appropriation (inside debt limit)	\$40,000 00
Appropriation (outside debt limit)	40,000 00
	<u>\$80,000 00</u>
Expended in 1930	29,479 70
Balance on hand January 1, 1931	<u>\$50,520 30</u>

## POWER PLANT IMPROVEMENTS, ETC.

Appropriation of \$43,000.

On December 31, 1929, contract of Ames Iron Works for installation of engine generator set in Power Plant. Contract completed and accepted May 27, 1930.

Appropriation . . . . .	\$43,000 00
Expended through December 31, 1930 . . . . .	40,248 19
	<hr/>
Balance on hand January 1, 1931 . . . . .	<u>\$2,751 81</u>

## NEW SURGICAL BUILDING.

Account of the appropriation granted for erection of the Surgical Building which was opened in 1928:

Appropriation . . . . .	\$679,500 00
Expenditures . . . . .	634,209 31
	<hr/>
	\$45,290 69
Transferred to House Officers' Building . . . . .	\$1,576 90
Loan order rescinded . . . . .	34,500 00
	<hr/>
	36,076 90
	<hr/>
On hand January 1, 1931 . . . . .	<u>\$9,218 79</u>

## SURGICAL BUILDING, FURNISHING AND EQUIPPING.

Balance on hand January 1, 1931 . . . . .	<u>\$2,110 58</u>
(No expenditures 1930).	

## MEDICAL PAVILION.

Appropriation . . . . .	<u>\$766,289 53</u>
Balance on hand January 1, 1930 . . . . .	\$446,480 78
Expended to December 31, 1930 . . . . .	360,226 10
	<hr/>
Balance on hand January 1, 1931 . . . . .	<u>\$86,254 68</u>
Building completed and accepted by Trustees May 31, 1930.	
Total expended on buildings exclusive of architects' fees . . . . .	<u>\$680,034 85</u>

## NEW MEDICAL PAVILION, FURNISHING AND EQUIPPING.

Appropriation . . . . .	\$70,000 00
Expended through December 31, 1930 . . . . .	61,679 65
	<hr/>
Balance on hand January 1, 1931 . . . . .	<u>\$8,320 35</u>

## CHILDREN'S PAVILION.

On February 5, 1930, a loan appropriation of \$324,000 was granted, and on May 20, 1930, another of \$248,000

was granted for erection and completion of Children's Pavilion, making a total appropriation of \$572,000. Plans for this are well under way and bids will probably be advertised early in the coming year; \$176.15 has been expended for test borings in connection with this building, leaving a balance unexpended of \$571,823.85.

#### LAUNDRY BUILDING.

On February 5, 1930, an appropriation of \$174,000 was granted for erection and completion of new Laundry Building. Preliminary plans for this are now being made and bids will probably be advertised during the coming year.

#### REMODELING OLD WARD N BUILDING.

An appropriation of \$30,000 was granted on October 23, 1929, for remodeling Old Ward N Building, but as yet nothing has been done towards carrying out the original plans.

#### FILM STORAGE BUILDING.

On June 3, 1930, a contract was awarded for the erection and completion of a new Film Storage Building.

The cost of this, including architects' fees, was \$7,617.49. This expenditure was paid from regular hospital appropriation.

#### A. SHUMAN MEMORIAL BUILDING FOR CONVALESCENT MEN.

To the \$100,000 bequeathed by the late Abraham Shuman, \$4,869.64 has been added to January 1, 1931, making the total amount available on that date \$104,869.64.

#### SANATORIUM DIVISION.

New buildings and additions and equipment and furniture.

May 22, 1928 loan appropriation . . .	\$1,400,000 00
February 5, 1930, additional . . .	450,000 00
	<hr/>
	\$1,850,000 00
Expended through December 31, 1930 . . .	1,609,744 64
	<hr/>
Balance on hand January 1, 1931 . . .	<u>\$240,255 36</u>

This appropriation has been used for Men's and Women's Open-Air Ward Buildings, Nurses' Home, Admission Building, Kitchen and Dining Room Building and Power Plant. The two latter buildings are not yet completed. Also for installation of automatic sprinkler piping and equipment in connection with the foregoing.

Work on construction of a new roadway at Sanatorium Division has been planned and it is expected that the contract for this will be awarded early in the coming year as bids have already been advertised.

#### OUT-PATIENT DEPARTMENT.

The great development of out-patient or dispensary service has come within the last fifteen years. The dispensary is assuming an increasingly important role in the treatment and management of disease. The Out-Patient Department of the Boston City Hospital has grown from nine clinics to twenty-four clinics at the present time. In 1924 the average number of visits was six hundred a day. At the present time the average number of visits is eleven hundred a day. The monthly statistical sheets show that the new patients constitute less than 10 per cent of the total amount. This is the yardstick by which dispensary service is measured. The great numbers of patients who constantly use the Out-Patient Department in times of illness, and continue to so use it for subsequent illnesses, demonstrate their complete satisfaction and confidence in the work being done here.

The Boston City Hospital has been a pioneer in most of the new dispensary movements. It has demonstrated beyond the question of doubt the value of the unit system of records. Despite the belief which existed up to a few years ago that the appointment system was not feasible in large general surgical and medical clinics, it has been demonstrated that not only are they feasible, but that they are indispensable to the highest and most efficient clinic management.

The marked improvement in Staff attendance has proven the value of the time clock and the influence of the special Out-Patient Committee.

Distinct advancement has been made in the instruction of pupil nurses, and it would be impossible to overestimate the many-sided contacts which the modern out-patient department offers for nurse instruction.

Precision in organization and management has made possible a more exact and comprehensive method of undergraduate medical school instruction. Post-graduate medical teaching has many opportunities in an organization similar to ours. It would be interesting to quote from the report of the Social Service worker in the medical clinic: "The physical examination of the patient coming to this clinic today is as near a finished piece of work as it is possible to get, and the time, patience and study expended on each individual can only be appreciated by the closest association."

The Unit System of records having been successfully established in the routine of the Out-Patient Department, it was decided to organize a similar system for House records. The Record Committee met frequently during the summer and designed the new record forms. These sheets are  $8\frac{1}{2}$  inches by 11 inches and are held together by an Acco fastener. Since the record room in the new Administration Building was not finished, it was decided to start the new system in the Out-Patient record room. On November 1, 1930, the Neuro-Surgery and Nerve records were placed on this system, under which a patient's complete history is filed in one folder under one number. The Out-Patient and House histories are never permanently filed together. On the patient's admission to the Hospital all his previous House and Out-Patient histories are sent to the ward. When he is discharged, his Out-Patient history returns to the Out-Patient record room and the House history returns to the House record room. If the House history is desired in the Out-Patient clinic, it is ordered from the House record room by the House number which appears on the Out-Patient record sheet.

It is the hope of the Committee that at the conclusion of another year they will have organized the records of the whole Hospital on this Unit System.

#### MEDICAL AFTERNOON OUT-PATIENT CLINIC.

The Medical Afternoon Out-Patient Clinic has continued to function three times a week from 1.30 to 4.30 p. m. during the year. On an average there have been three or four physicians on duty with four or five medical students acting as clerks.

The clinic has grown considerably during the year. Patients with various forms of anemia have been studied

by Doctor Castle, Doctor Beebe and Doctor Strauss. Similarly, a group of patients with certain neoplastic conditions were taken care of by Doctor Jackson, Doctor FitzHugh and Doctor Rinehart. In addition, a new special clinic for the care of patients suffering from leukemia has been started by Dr. Claude Forkner. The Friday afternoon special clinic is conducted by the house physician of the Fourth Medical Service for patients who return after discharge from that service.

Patients treated in the special clinic are received from the morning Medical and Neurological Clinics; but a considerable per cent of the patients this year were sent from the Dermatological, Surgical and other clinics. During the year 779 patients were treated, and the number of visits was 1,629.

The expectation attached to the establishment of this clinic has been fulfilled, as this clinic serves individuals with the first signs of disease. Here contacts are made which stimulate investigations pertaining to the prevention of progressive disease. In that sense, the afternoon clinic is a small but significant unit which deals with public health problems.

#### MEDICAL DEPARTMENT.

The Medical Services treated a total of 7,592 House Patients and 14,195 out-patients during the year 1930. These out-patients made a total of 29,380 visits to the Hospital for treatment.

#### SECOND MEDICAL SERVICE.

In general the plan of ward visiting and teaching is the same as heretofore. Two separate visits are made each day, one a routine ward visit, the other a teaching visit. In this way, both patients and House Staff receive a maximal amount of attention from the Visiting Staff. The Second Medical Service is now doing its full share of teaching and is giving satisfactory service to both students and House Staff.

Repairs are now in progress in the ward laboratories, which will make these laboratories much more efficient. The one big problem remaining is the lack of facilities for doing basal metabolism tests. Attention is invited to this problem.

The question has been asked, in an institution like the City Hospital, is the work of the House Staff better

done and does the patient receive better care as a result of improved physical facilities, new equipment, secretarial help, etc.? Our answer is an unqualified "Yes." We believe the patient is the gainer, and this is a sign of real progress.

Doctor White's supervision and advice regarding gastro-intestinal cases on this service is of great value to the Staff and the students.

### THIRD MEDICAL SERVICE.

During the year 1930 the Third Medical Service treated 1,735 House cases. The service has also been used extensively for teaching purposes for Tufts College Medical School, both for demonstration of cases by the visiting men and the teaching assistants, and also for actual work done by the fourth-year students themselves acting as clinical clerks. The various members of the Visiting Staff on this service have addressed different medical societies as recorded on another page of this report. At the present time research work is being carried on regarding rheumatic pneumonia. Vaccine treatment of pneumonia and variations in blood pressure with special reference to hypertension.

The First Medical Service is nominally connected with the Third Medical Service for teaching purposes in Tufts College Medical School. The two services combined teach second, third and fourth-year students. There are from fifteen to twenty fourth-year students continuously at work on the wards. Besides this, the two services take care of twelve third-year students each day on the wards and on one day a week about thirty-six second-year students receive instructions there. Three days a week one or two cases are taken from the wards to the Thorndike Amphitheatre for the purpose of clinical demonstration.

The new Medical wards have proved to be ideal both for clinical work and also for teaching. Not only are they splendidly equipped both for the care of the patients and also for scientific work, but, furthermore, it has been possible to obtain supplies and equipment with the minimum amount of delay. Everything which has been needed by the service has been provided without question. The personnel of this service greatly appreciate the facilities which they now have for their work and are very grateful for them.

## FOURTH MEDICAL SERVICE.

The past year has been one of considerable change in the general organization of the visiting staff and methods of conducting the ward work. Year by year the work of the resident staff has become more complicated and exacting. The actual number of patients admitted during recent years has steadily increased (1925, 1,307; 1926, 1,430; 1927, 1,558; 1928, 1,657; 1929, 1,831). As a result of these increased demands, an additional house officer was appointed in the fall of 1929.

A similar need for increase in the visiting staff has long been obvious, and, during the year, a new schedule of visiting has been put in practice. The service is divided into two essentially equal divisions, *i. e.*, male and female wards, with a schedule of visiting which provides for the year. Two senior visiting physicians are on duty at the same time, each in charge of a division, and, in turn, assisted by a junior member of the staff who visits on the alternate days.

As a teaching service, the needs of equipment for teaching and for the routine care of the patient cannot be separated, since the interest to the two are common. There has been a constant handicap, due to somewhat inadequate facilities for laboratory work and space for conferences adjacent to the wards.

Through the generous cooperation of the Superintendent and Trustees, this condition is to be remedied. Plans have been accepted for renovation and remodeling of the Burnham Building which will not only insure better care of the patients but inevitably make for a greatly improved morale on the part of the staff.

During the year, several medical papers have been published by members of the visiting staff. They are listed with the bibliography of the Staff published in this volume.

The greatly augmented number of cases treated this year in comparison with those of previous years, the very satisfactory equipment now being provided, and the adequate house staff, affords every opportunity for the study of clinical problems on the wards. The extraordinary development of so-called laboratory research throughout the country during the past twenty years has had the effect of materially diminishing the interest in so-called clinical studies. This result is

unfortunate, since research work in a hospital should bear a direct or indirect relation to clinical problems. The fact that the Fourth Medical Service is intimately related to the Thorndike Memorial Laboratory has permitted the recent problems studied by the Thorndike Memorial Laboratory Staff to be of a practical clinical sort. The fact that daily the wards are visited by a member of the Research Laboratory infiltrates to the service the spirit of inquisitiveness and investigation. It is important, however, to increase the study of patients by encouraging each man associated with the service to study some phase of disease at the bedside.

Some of the men associated with the Fourth Service, not officially connected with the Thorndike Memorial Laboratory, are making intensive studies of patients, for example, Doctor Stetson's studies of diabetics; Doctor Reynold's observations on the social problems in relation to disease; Doctor FitzHugh's observations on chronic arthritis.

#### FIFTH MEDICAL SERVICE.

In the latter part of September, 1930, the Fifth Medical, or Boston University Service, was established, with Dr. John A. Foley in charge; the Visiting Staff consisting of Doctors John A. Foley, Dwight O'Hara, William T. O'Halloran, Norman A. Welch and Bernard I. Goldberg.

The house officers and residents began service on October second. Ward J and half of Ward L were given to the service for a year.

From the opening of the service through December 31, 322 patients were treated.

#### GRADUATE TEACHING.

The progress in graduate teaching at the Hospital has been very gratifying. This is due to our extensive clinical material and to the whole-hearted support of the medical staff. It is probable that soon this Hospital will become the leading place for graduate teaching in the community.

The graduate teaching during the summer months was as follows:

A course given by Doctor White and Doctor Robey, Wednesday morning during June and July. This course was well attended and became so popular that

as a result of a general request, the course was offered throughout the year beginning in October.

A course in Gastro-Intestinal Diseases, mornings of one month given by Dr. Percy B. Davidson. This course also was well attended and popular.

A course in General Medicine given throughout the day during the month of August, under the general direction of Doctor Ohler. This course was offered for the first time this year. It proved to be so successful that it will not only be offered for another summer, but may be extended to include two months.

Graduate teaching was continued during the fall and winter months.

All graduate teaching is conducted through the Graduate Department of the Harvard Medical School. As a sort of liaison officer between the School and the Hospital, the School has appointed Doctor Ohler to have general charge of details connected with the actual teaching.

#### SURGICAL DEPARTMENT.

The Surgical Department treated 9,391 ward patients and 30,399 out-patients during the past year. These out-patients made 95,198 visits to the Hospital. Beside these, there were 13,941 accident cases treated; these accident cases made 17,926 visits to the Hospital.

#### FOURTH SURGICAL SERVICE.

The Fourth Surgical Service has been conducted satisfactorily and the results seem the same as in previous years. There is unity of cooperation. The relationship between the patients and the personnel of the service has been improved, the desire being to care for the patients as well as if they were private patients.

#### FIFTH SURGICAL SERVICE.

A report of the activities of the Harvard Surgical Teaching Service for the year 1930 follows:

Progress during the first half of the year was impeded by the discussion of the future policies of the service. During this period the care of the patients did not deteriorate in quality; this demonstrates the loyalty of the members of the Service to the Hospital and its primary purpose. Instruction in Fourth-Year Surgery continued in a satisfactory manner. Doctor Walker

has assumed full responsibility for surgical teaching of Harvard Medical School students in this Hospital. Eighteen colleagues are associated with him in teaching. Dr. Stanley J. G. Nowak, a full time teacher, is affiliated with the service as Associate in Surgery. Dr. Robert Aldrich, Resident Surgeon, also an enthusiastic teacher, has brought to us ideas from Johns Hopkins Medical School.

The quality of the house officers, as demonstrated by their work, is excellent.

Features of progress on this Service now under way are as follows:

A study of the mortality in acute appendicitis for the years 1907 to 1910, inclusive, as compared with that for the years 1927 to 1930, inclusive. This is a rather extensive study which will take several months to correlate.

Doctor Cochrane is most successfully solving the problem of the surgical treatment of thyroid disease as applied to this Hospital.

Doctor Nowak is interested in the study of post-operative pulmonary complications, with the idea of prevention and treatment. This subject is one that is interesting surgeons throughout the country at the present time.

The health of house officers in this Hospital, and especially those affiliated with the Harvard Surgical Teaching Service, has been a cause of worry on account of the fact that pulmonary tuberculosis is not uncommon among these men. As a consequence, with the cooperation of Dr. Soma Weiss, we are having periodical examinations of each house officer on the Service. Their histories and physical findings, together with X-rays, will constitute a permanent record of house officers.

This study should sooner or later be extended to all the house officers of the Hospital.

Endeavors toward raising the percentage of *post mortem* examinations on the Service has yielded results. This Harvard Service has the highest percentage of autopsies of any service in the Hospital during the year.

The future of this Service as a teaching and investigative unit, and as an example for the other surgical services, is most important in the development of the Hospital. This Service enlarged in size and scope should be seriously considered as a potential Surgical

Unit in the plans of the Surgical Building Program. It should be comparable in its purpose to the Thorndike Memorial and the Neurological Unit.

#### SIXTH SURGICAL SERVICE.

The Sixth Surgical Service has had a very successful year on the whole. The House work has gone along very satisfactorily and all of the staff have performed their work efficiently.

There is no change to be noted except that we have established follow-up clinics in the Out-Patient Department, and also a fracture reference clinic in the Out-Patient Department. These have been put under special jurisdiction of a group of the younger members of the staff, Doctors Cotting and Sullivan, and with them a temporary appointee, Doctor Peterson, whom we hope to have presently permanently appointed. Doctor Cotton's personal clinic on Friday mornings has been continued.

We have one rather serious trouble. It is questionable whether or not our present plan of providing house officers is going to work.

It is evident that we must have a different arrangement; either the taking of men in from the outside for long service, which would probably accent the strict orthopedic slant of the service (which has not been our desire), or we can make this service a rotating part of the training of all surgical house officers. At present the latter seems preferable.

#### SURGICAL RESEARCH.

When the laboratory was turned over to Doctor Maddock on July 1, 1930, it was necessary to select and procure sufficient and adequate apparatus for carrying out a research program. Rigid economy was practised and very little money spent for furniture, tables and cabinets. It was found possible to adapt various discarded or unused articles in the hospital, and with hammer, saw, and a little paint to make very presentable laboratory furniture. Much of the scientific equipment had to be purchased, but the director was able to furnish several hundred dollars' worth of apparatus personally.

The laboratory began functioning in October, but throughout the fall the work of securing equipment

continued. In November, Dr. Frederic J. Cotton suggested that the laboratory institute the production of sterile maggots for the treatment of cases of chronic osteomyelitis. The director spent several days in Baltimore studying Doctor Baehr's methods. In December we began treating several cases, which have since been discharged from the Hospital with very satisfactory results. At present there are three cases under treatment in the Hospital. It is impossible to judge on the basis of our own small series of cases how valuable this method of treatment may become, but in the light of Doctor Baehr's several years' experience it is probable that it offers more consistently good results than any of the other forms of treatment. Whatever the final outcome may be, it is undoubtedly good to feel that this hospital is the first one in Boston, indeed in New England, to seriously attempt to make use of this ingenious procedure.

During the winter, my associate, Dr. Stanley J. G. Nowak, has been working on spinal anesthesia. As you all know, spinal anesthesia is of great value in many conditions, but is subject to the great drawback that a certain percentage of the patients die suddenly and mysteriously while under its influence. There has been very little attempt made to determine by actual experiment the cause of these deaths. It is probable that study of the fundamental physiological laws concerning spinal anesthesia will yield the same dividends in human life that better knowledge of the inhalation anesthetics did in the decades which followed their introduction.

Doctor Binney and the director are working on a physiological study of the underlying causes of death in operations on the root of the lung.

In conjunction with Dr. Charles C. Lund a series of patients suffering from cancer have been studied with the idea of finding out whether the glucose tolerance test is of any value as an early diagnostic procedure.

The director is continuing researches on problems which were begun prior to last July, on the total removal of the liver, and on the absorption of glucose from the alimentary tract. Much of this work is nearing completion. The director is also beginning work on a method of carrying out surgical operations on the *foetus in utero*. This field is extremely promising for the study of the effects of removal of various glands of

internal secretion, particularly the thyroid. It is to be hoped that it will be possible to produce cretin animals comparable to human cretins by this method.

The laboratory is also attempting to study rare and unusual cases which appear on the wards. Recently a very thorough study was made of a case of acute yellow atrophy of the liver, which was confirmed at autopsy. In this instance the diagnosis was made two days before death, on the basis of our blood chemistry findings. This case will be reported in detail shortly. This hospital offers unusually good opportunity for work of this type because of its widely varied clinical material.

The laboratory is in need of space, technical help, and money. Last summer the laboratory seemed large and commodious, but a few months of actual work has shown that even with our present staff the quarters are cramped. If the members of the clinical staff continue to interest themselves in problems, we will be forced to refuse them the opportunity of working, or stop our own activities. The Superintendent has promised to let us take over the quarters of the record rooms as soon as the new Administration Building is completed, so that the problem of space can be solved without any additional expense.

During the past winter we have had the services of two very capable young women, who have acted as voluntary assistants. One of these has spent almost all of her time raising maggots and taking care of the flies. If we are to continue with this work, her services are indispensable. The other voluntary assistant has been helping Doctor Nowak and myself as a physiological technician. She is now well trained and would be difficult to replace.

The financial needs of the laboratory have been stated in the budget for this year. Despite every effort to economize, research work proves to be expensive. We have not yet obtained all the items requested in the original list of equipment submitted to this board. Some of these we have been able to borrow, but it will be necessary to purchase a few more pieces of apparatus as soon as our new budget is made available. All of the equipment which we have or which is still to be obtained will be usable for years to come, and can be moved into a new building at any time the quarters are available.

The director wishes to thank the Board of Trustees and Doctor Dowling for the fine spirit of cooperation which has been shown in the establishment and fitting out of the laboratory. It is the hope of the laboratory staff that the output of the unit will be worthy of the expenditure which the hospital has made.

#### NEUROLOGICAL DEPARTMENT.

During the past year the new wards have been opened and the patients and laboratories have been moved into the new Medical Building. This has enlarged the scope of the department and given the Staff the chance to expand and to improve work, for which they have been waiting for five years. The new quarters are extremely good and the Staff wish to express their gratitude to the Trustees and to the Superintendent who have made this great improvement possible.

Until the end of August the work went on as before on Ward J with a few patients on Ward L. Then, during the last week of August, the move was made into the new building. Here the Neurological Service joined forces with the Neurosurgical Service. This amalgamation has led to a great improvement in the treatment of the cases, especially those that need operation.

As usual, a large part of the work of the Neurological Service has been the consultation work. During the period from September 1, 1930, to January 1, 1931, the number of cases as listed below were seen in consultation officially by the Neurological Resident Physician. Most of these cases were reviewed by a member of the visiting staff of the Neurological Unit.

For the	Cases Seen.
First Medical service . . . . .	49
Second Medical service . . . . .	96
Third Medical service . . . . .	33
Fourth Medical service . . . . .	46
Fifth Medical service . . . . .	14
First Surgical service . . . . .	11
Second Surgical service . . . . .	12
Third Surgical service . . . . .	7
Fourth Surgical service . . . . .	9
Fifth Surgical service . . . . .	5
Sixth Surgical service . . . . .	3
Neurosurgical service . . . . .	4

*Carried forward* . . . . . 289

For the	Cases Seen.
<i>Brought forward</i> . . . . .	289
Gynecological service . . . . .	5
Obstetrical service . . . . .	5
Aural service . . . . .	1
Pediatric service . . . . .	3
Total . . . . .	<u>303</u>

In addition to the above cases a considerable number of cases have been briefly and unofficially seen for the above services for cooperation concerning lumbar punctures, the diagnosis, care and disposal of medical and surgical cases that had neurological and psychiatric complications.

There is also a large amount of purely psychiatric work. During the period from September 1, 1930, to January 1, 1931, the following cases have been committed:

- (a) To the Boston Psychopathic Hospital . . . . . 28
- (b) To the Boston State Hospital . . . . . 46
- (c) Numerous cases have been advised to go to other municipal hospitals, Long Island, Pondville, Mattapan, Bridgewater, Monson State Hospital, etc.

As Doctor Cobb wrote to the Superintendent about a case of suicide on November 14, it is important that the Neurological Service be called in on all of these patients who have an abnormal mental state, and it would seem extremely important that there be some small ward where these acutely disturbed patients may be treated in the Hospital. It is usually argued that these patients may be immediately transferred to the appropriate mental hospital, but, as a matter of fact, there are always a small group which are kept in the Hospital for one reason or another and unless there can be arranged a small psychiatric ward, there will always be a great risk of accident of these cases.

It is apparent that the report of the Cerebrospinal Fluid Laboratory shows a great advance in the work on spinal fluids. This means an important advance in the diagnostic methods of the hospital.

The Neuropathological Laboratory, although carrying on a majority of research work, still does important clinical work. The most important part of this is the immediate diagnosis of pieces of brain tumor removed at operation. This only emphasizes the fact that the treatment of patients and the research work go hand in

hand and are really indivisible. It is impossible, therefore, to divide the expenses of the one absolutely from those of the other. There will always have to be a reasonable compromise between the school and the Hospital on these expenditures.

### REPORT FROM THE CEREBROSPINAL FLUID LABORATORY.

		Average per month.
Work done on cerebrospinal fluids:		
From October, 1927, to December 31, 1927:		
Total number received . . . . .	215	18
Total number of determinations . . . . .	505	
Total number from nerve service . . . . .	114	
50.7 per cent of the cases from the nerve service.		
For the year 1928:		
Total number received . . . . .	744	62
Total number of determinations . . . . .	1,813	
Total number from nerve service . . . . .	366	
49.2 per cent of the cases from the nerve service.		
For the year 1929:		
Total number received . . . . .	1,230	102
Total number of determinations (not counted).		
Total number from the nerve service . . . . .	567	
46.1 per cent of the cases from the nerve service.		
For the year 1930:		
Total number received . . . . .	2,050	171
Total number of determinations . . . . .	5,105	
Total number from the nerve service . . . . .	559	
27.26 per cent of the cases from the nerve service.		

This report shows that the number of spinal fluids sent to the laboratory each month has increased steadily. In 1927, when the laboratory was started, the average number per month was 18; in 1928 it was 62; in 1929 it was 102 and in 1930 it was 171. During 1930 over 2,000 fluids were received, and upon these fluids more than 5,000 individual determinations were made.

During the years 1927 and 1928, half the spinal fluids received came from the Neurological Service. During 1930, in spite of the enormous increase in the total number of fluids received, less than one-third came from the Neurological Service, while, 1,490 fluids were received from the various Medical, Surgical and Special Services in the Hospital.

This reflects the need for such a cerebrospinal fluid laboratory, the increasing interest in the examination of

cerebrospinal fluid throughout the Hospital and the service which this laboratory renders to the Hospital as a whole.

#### NEUROPATHOLOGY LABORATORY.

The work of this laboratory may be conveniently divided into three classes:

1. Tissue of the nervous system is prepared for microscopic study for the various investigators of this department whose researches have neurocytological aspects.

2. Interesting or obscure cases from the Neurological Service that have subsequently died and come to autopsy are studied in an attempt to verify or explain their baffling symptoms. Intracranial tumors removed at operation are diagnosed by supravital technique during the operation, thus enabling the surgeon to know the nature of the tumor and to fashion his procedure accordingly.

3. Several problems of investigation of an experimental or developmental nature are under way among which may be mentioned "The Anatomy of the Perivascular Space," "Running Fits in Dogs," and "The Evolution of the Myelin Sheath."

#### NEUROSURGICAL SERVICE.

Since March, 1930, when the Neurosurgical Service began to function, 172 patients have been admitted to its care. Of these, 115 were discharged, 18 died, and 39 remained in the Hospital on the first of January, 1931.

#### GYNECOLOGICAL AND OBSTETRICAL SERVICE.

During the calendar year of 1930 the two Services now constituting the Gynecological and Obstetrical Department have continued to function harmoniously, dividing equally between them the work of the two branches of the Service, coöperating in every way, and holding monthly joint Staff meetings as a single unit.

During this year 2,174 obstetrical cases were admitted to the House, an increase of 536 cases over the preceding year. In August the First Maternity Ward, which hitherto had been occupied by the Medical Service, was turned over to the Gynecological and Obstetrical Department. This increase in facility made it possible to care for the large increase in the number of cases noted. Of the 2,174 patients admitted, 1,986 were delivered of

2,005 babies, there being 19 sets of twins. Of these deliveries 1,378 were normal and 608 were operative. The total number of maternal deaths was 14, representing a percentage of 0.7. It is noteworthy that the months of June and September passed, each without a single maternal death. The total number of stillbirths was 71, representing a percentage of 3.5. Of the cases admitted to the House, 1,622 were referred from the Out-Patient Department and 552 came from various other sources.

A total of 1,884 Gynecological cases were admitted to the House, upon whom there were performed a total of 1,320 operations, of which 508 were major and 812 minor. The total number of deaths of Gynecological patients was 36. The month of October passed without a gynecological death.

In the Out-Patient Department the total number of new gynecological cases was 1,394 and the total of new obstetrical cases was 1,414. The number of visits made on new and old gynecological patients was 4,511. The number of visits on new and old obstetrical patients was 4,941.

Lectures to nurses have again been given by the Visiting Staff, thirty-six in obstetrics and eight in gynecology. The teaching of students has been continued for the Harvard Medical School and for the Tufts Medical School; but the internes from the United States Naval Hospital, Chelsea, were not sent to the City Hospital for instruction this year.

Dr. Joseph P. Cohen, who was on leave of absence for the first eight months of the year, returned to duty on September 1. Dr. Nathaniel R. Mason, Surgeon-in-Chief of the First Gynecological and Obstetrical Service, was on leave of absence throughout the year and at the close of December presented his resignation which, to the great regret of the entire Staff, it seemed inevitable to accept. Doctor Mason has voluntarily retired from our Service with the cordial affection, esteem and good wishes of all its members.

#### AURAL AND LARYNGOLOGICAL DEPARTMENT.

During the year 1930, 3,247 ward patients were treated in the Department for Diseases of the Ear, Nose and Throat, and 9,487 out-patients were treated. These out-patients made a total of 19,261 visits to the Hospital for advice and treatment.

## OPHTHALMIC DEPARTMENT.

During the year 1930, the Ophthalmic Service treated in the Out-Patient Department 4,890 patients, who made 11,948 visits. The new cases treated were 3,903. The number of refractions was 3,391. There were 165 admissions to the House and 129 patients underwent operation.

## DERMATOLOGICAL DEPARTMENT.

During the year, 25,644 visits were made to the Out-Patient Department by 5,258 patients. Of these 4,247 were new cases. Of the total number of visits, 12,512 were made by syphilitic patients, of whom there were 380 new cases. In other words about 9 per cent of the new cases were syphilitic and nearly half of the visits were made by them. Among the new cases of syphilis 142, or nearly 40 per cent, were in the primary or secondary stage, showing that the control of the spread of syphilis is still far from satisfactory. The work of caring for this large number of syphilitic patients is now so systematized that by shortly after 10 o'clock on each clinic day thelueticeases are all treated. In treating other skin conditions there has been an increasing use of quartz light and radium treatment, so that we urgently need more equipment along these lines. Again I would mention the need of an X-ray machine for therapeutic purposes in the skin department.

The house officers assigned to the department from the Fourth Medical Service have been uniformly of excellent calibre and seem much interested in the work. One of the graduate nurses assigned to the department was obliged to resign on account of sickness, which brings up the question of regular examination and treatment of house officers and nurses. Through the cooperation of the superintendent of nurses we have been very fortunate in having excellent graduate and undergraduate nurses attached to our department. The work of the Social Service has been excellent, but I think that the present worker is much overworked and should have an assistant.

The house service is still rather disorganized because of the fact that the patients are spread all over the hospital. With the assignment of students from the fourth year of Tufts Medical School throughout the school year, a good deal of careful laboratory and investigative work could be carried on in the skin service,

if we had our own ward and our own laboratory. I think this is the only service in the hospital which does not have its own laboratory. The laboratory is urgently needed for the special work in the study of dermatological cases.

#### PATHOLOGICAL DEPARTMENT.

The amount of work done in the laboratory the past year once again reflects the increased growth of the Hospital, but perhaps to a more marked degree than in the previous years. As concrete examples, 83 more autopsies, 448 more surgicals, 600 more bacteriological examinations, approximately 7,000 more diphtheria culture diagnoses and 3,000 more Kahn tests were carried out in 1930 than in 1929. Such a marked increase in the amount of work makes us realize more than ever the handicaps and limitations placed upon us by lack of proper space and equipment.

The clinical-pathological conferences have been an unprecedented success. The amount of material presented each month has been large in amount and much of it of unusual interest. Both the Staff, house officers and students have been constant in attendance and apparently appreciative of the opportunities presented. As an indication of the interest in these conferences and of their value, a group of physicians from Providence, R. I., have attended them.

The clinical laboratory has been moved and its former rooms are being converted into a photographic plant.

A paratyphoid infection appeared among our guinea pigs this autumn and assumed epidemic proportions, resulting in a loss of the majority of our animals. This has forced us to buy some guinea pigs and also makes us seriously consider the advisability of altering our practice of raising animals to buying them.

Doctor Mallory is continuing his work on cirrhosis of the liver, with especial reference to the experimental production of cirrhosis.

Doctor Parker in collaboration with Dr. Henry Jackson, Jr., is going on with his studies of diseases of the lymphoid and myeloid tissues.

Dr. G. K. Mallory is pursuing an investigation into the nature and origin of various pigments and means for their recognition.

Dr. T. T. Walker, who is visiting pathologist to Mattapan, is conducting experiments on tuberculosis and has already one paper in press and another in preparation.

WORK OF THE PATHOLOGICAL LABORATORY DURING THE YEAR  
1930.

Autopsies . . . . .	467
Surgical diagnoses . . . . .	3,564
Clinical bacteriology, positive . . . . .	1,613
Clinical bacteriology, negative . . . . .	1,487
Blood cultures, positive . . . . .	464
Blood cultures, negative . . . . .	627
Guinea pig inoculations . . . . .	187
Bacillus diphtheriæ, total . . . . .	26,604
Bacillus diphtheriæ, positive . . . . .	3,891
Wassermanns . . . . .	4,366
Number of positives . . . . .	1,795
Kahn tests . . . . .	15,069
Positive Kahn . . . . .	2,108

THORNDIKE WARD.

The ward of the Thorndike Laboratory offers something to American medicine that is not to be found elsewhere in the country. This clinical laboratory is situated in the midst of an institution in which there are patients with all sorts of disorders and thus many individuals, while serving to advance knowledge, receive themselves great benefits. It is thus possible to select from such large numbers of patients those individuals most likely to be benefited by special therapeutic procedures or whose observation may yield information of value from an experimental point of view.

The ward is, however, run as an adjunct to the laboratories for clinical investigation. The patients in the ward are primarily for special study. For this reason it is not possible nor desirable to manage the ward altogether as are the wards of the rest of the hospital. Without the fortunate provisions of the Trustees in assigning a head nurse with special qualifications, an expert dietitian, and a secretary for the care of the often voluminous records, the purpose of the ward would be thwarted.

In the interest of scientific accuracy the patients on the ward must in certain respects be governed by the strictest rules of treatment and care. This makes it important for the general atmosphere to be agreeable

and for any small attentions possible to be given. We believe this to have been accomplished and it has been gratifying to hear patients say on occasion that the ward is "like home" to them. This achievement of the management of scientific observations on the patients indicates that they appreciate the interest of the physicians and the solicitude of the nurses for their general welfare. It is dependent to a great extent upon the excellent coöperation that is given by the nursing and dietetic staffs.

The generosity of the Trustees in defraying the expenses of patients who are unable to pay for their care has made the necessary prolonged sojourn in the hospital possible and relieved them of the worry which would naturally arise were they retained here to their financial detriment. The fact that certain patients can remain here without loss of money to them makes all the difference between successful, carefully planned study and the apologetic type of clinical investigation that is done so frequently in many other places in America.

The routine of the ward and the number of patients has continued to be essentially the same as in the past two years.

#### THE THORNDIKE MEMORIAL LABORATORY.

Dr. George R. Minot writes as follows:

There is no question but that the work of the Thorndike Memorial Laboratory, Second and Fourth Medical Services and Afternoon Medical Out-Patient Clinic is recognized all over the world as indicated by the fact that numerous institutions have adopted certain measures modeled on those carried out here. The potential possibilities of developing the best medical unit in America, if not in the world, are at present at The Boston City Hospital. These opportunities for work are undoubtedly great, but would be strengthened by development of the other departments of the hospital as has occurred for the Neurological Unit. The artificial barriers between different fields of knowledge have handicapped American science and art. This inherited tradition is fortunately broken down and one of the ways that should lead to great advances in the future is the cooperative investigation of physicians, scientists and all types of scholars trained in different ways.

For example, in very recent years, important knowledge has been obtained by the joint studies of engineers and physicians concerning the prevention of disease and for enhancing contentment in industry, between chemist and clinician in the therapy of disease. Progress can be expected when there is a close contact of different types of physicians associated with complete units for various branches of medicine.

The continued rise of the Thorndike Laboratory is dependent primarily on the splendid work and ability of the late Doctor Peabody. It must never be forgotten that he established this clinical laboratory on a firm basis. Furthermore, it is recognized far and wide that the warm support of the Trustees of the Hospital and the Superintendent have contributed greatly to the success of the laboratory and its ever increasing activities.

Two undoubtedly internationally recognized advances in medicine have been made here within the year, namely:

1. Doctor Castle's progressive studies on a factor secreted by the normal stomach and absent under certain conditions independent of other gastric secretions. These observations have revolutionized thought regarding certain aspects of nutrition and are thus of deep significance.

2. Doctor Vaughan's and Doctor Muller's observations on the influence of blood-forming substances in pigeons. This work establishes for the first time a method of testing certain products in the laboratory.

Men from England, Austria, China and Denmark have worked in the laboratory during the past year which indicates the wide-spread interest in the Thorndike. This is likewise shown by the fact that members of the staff received their medical degree from ten different medical schools.

There remain many topics worthy of praise, but the trend of progress is set forth in this and the attached reports. Democracy has dragged in its wake social, economic, educational, institutional and political problems infinitely more perplexing than the relatively simple problems which its credulous crusaders undertook to solve. Practice can not be slowed down or halted; intelligence must, however, be accelerated. Our duty is to work cooperatively to benefit mankind.

Under the directorship of Doctor Minot, the following persons, who aid by supervising different phases of the laboratory work, have made a report:

Soma Weiss, M. D., Assistant Director, and in charge of the section for cardio-vascular disorders.

James M. Faulkner, M. D., in charge of subdivision of electrotherapy.

Robert N. Nye, M. D., and Wheelan D. Sutliff, M. D., in charge of the section for immunology, bacteriology and infectious diseases.

Henry Jackson, Jr., M. D., in charge of the section for cancer and allied disorders.

Francis H. L. Taylor, M. D., in charge of the subdivision, chemistry.

William B. Castle, M. D., Chester S. Keefer, M. D., and George R. Minot, M. D., in charge of the section for disorders of the blood, nutrition, etc.

#### DIVISION OF THE THORNDIKE LABORATORY CONCERNING DISORDERS OF THE BLOOD, NUTRITION AND ALLIED TOPICS.

Since the opening of the Thorndike Laboratory, studies of the diseases of the blood and blood forming organs have been carried on with ever increasing intensity. During 1930 no less than fourteen physicians were here mainly engaged in this study under the general supervision of the Director. This subject may now fairly be considered the major activity of the laboratory.

It is significant of the wisdom of the founders of the Thorndike Memorial that the building itself contains both laboratories and an investigative ward for the care and study of sick individuals, and that provision was made for intimate contact with the general wards of the hospital.

These conditions are particularly important, both because of the desirability of a large clinic from which to derive material for study and also because of the necessity of prolonged and careful observation under conditions of scientific accuracy. For the peace of mind of both investigators and patients, and for the sincerity of their relationship, the generosity of the hospital in frequently defraying the expenses of impecunious patients cannot be too gratefully emphasized. The ideal conditions which result from these factors make possible studies of blood disturbances which

would elsewhere be next to impossible. Investigations originating in the Thorndike Laboratory are being carried out, either here, upon patients transferred through the kindness of the members of the staffs of the Massachusetts General, Peter Bent Brigham and Beth Israel Hospitals, or actually in the wards of those hospitals. It is certain that the facilities at this hospital are now assuring productive activity.

The studies carried out by the various groups of workers are coördinated as far as possible by a weekly conference conducted by the director for the purpose of exchange of ideas, suggestions and criticisms. Under the actual supervision of Doctor Minot, types of investigation, both theoretical and practical, are being carried out and have yielded important results during the past year.

Following the discovery of the effectiveness of liver feeding in pernicious anemia by Doctor Minot and Doctor Murphy, collaboration with Dr. Edwin J. Cohn, the physical chemist of the Harvard Medical School, was begun for the purpose of discovering, if possible, the nature of the effective principle contained in liver, and for producing extracts of high potency and small compass for clinical use. During the past year the chemical problems of fractionation had reached such a degree of maturity that small amounts of highly purified substances could be injected intravenously with prompt and characteristic effects on the anemia of pernicious anemia patients. The substance is now three thousand fold as concentrated as in liver. Although so far no product has become commercially available for intravenous use, it is apparent that this possibility is now realizable and may be accomplished shortly. Indeed, experiments conducted by Doctor Castle in conjunction with Dr. F. H. L. Taylor in an effort to discover a practical means of producing such material have been begun.

Dr. Janet Vaughan and Dr. Gulli Lindh Muller, at the suggestion of Doctor Minot, have worked upon the effect of administering effective liver extracts to pigeons. The work was suggested by the previous extensive observations of Dr. Lindh Muller on the effect of diets on blood regeneration in the pigeon. Great credit is due to Doctor Vaughan for having demonstrated by these experiments a high degree of correlation between liver extracts effective in pernicious anemia patients

and in grain fed pigeons. The significance of this step is that it promises to give a simple test for the potency of liver extract which may render unnecessary the undesirable method of employing a patient as a test object. The method will therefore be of the greatest practical use in securing a supply of potent liver extract for the sufferers from pernicious anemia.

In addition to these studies, Doctor Vaughan made careful observations of the striking changes in water balance of patients with pernicious anemia during the liver extract induced remissions.

In respect to other types of anemia, work has also been carried on under the direction of Doctor Minot by Dr. Arthur Marlowe and Dr. F. H. L. Taylor. They were able to improve greatly and to simplify the existing methods for iron determination, in addition to carrying out a careful study of certain aspects of the iron metabolism of the normal individual and patients with anemia.

The problem of the necessary maintenance dose of liver or liver extract had nowhere received the necessary critical study until Dr. Richard T. Beebe and Dr. George Eric Lewis, at Doctor Minot's suggestion, undertook the study of over one hundred patients with pernicious anemia who returned at frequent intervals to this clinic and to the Peter Bent Brigham Hospital Clinic. The resulting data have been analyzed and a report is now in press which promises to be a contribution of great practical importance.

During the past two years many patients suffering from "secondary" anemia have been benefited by dosage with large amounts of iron suggested by Doctor Minot. His advocacy of this method has done much to improve the treatment of secondary anemia in this country, even though a complete publication of the results has not yet been made. While further studies are being conducted, the available data are now being analyzed by Doctor Minot and Doctor Heath so that an objective notion of the effectiveness of iron therapy may be published.

Dr. Lindh Muller, in addition to achieving many valuable new points of view about the relationship to dietary deficiency while on leave of absence in India, carried on in the laboratory experiments concerned with the effect of various substances on the maturation of primitive cells of the chick embryo. On pernicious

anemia patients in the Thorndike Ward, she also studied the fluctuations in lipoids and fatty acids during the remission, a problem which may have great bearing upon the central nervous system changes in this disease.

Doctor Mettier, who left at the end of the summer, has recently published studies, conducted with Doctor Minot and Dr. Wilmot C. Townsend, on the nature of the anemia in scurvy, and has clearly demonstrated in those cases under observation a specific relationship to a lack of Vitamin C. He has also this year carried out to completion observations made with Doctor Minot on the effect of iron in acid and alkaline medium given to cases of secondary anemia. These observations furnish the clew to the explanation of the achylia associated with large numbers of these patients.

Doctor Castle, in conjunction with Doctor Heath and Doctor Strauss, has continued his observations on the etiology of pernicious anemia. A considerably greater definition of the work already accomplished has been achieved, particularly in respect to the nature of the factor shown to be absent from the stomach contents. Recently, in conjunction with Doctor Taylor, systematic chemical studies of the protein metabolism in this disease have been undertaken. With Doctor Taylor he has also begun work upon the development of a practical liver extract for intravenous injection.

In collaboration with Dr. Edwin F. Gildea of the Department of Neuropathology of Harvard Medical School and with Dr. Egon E. Kattwinkle, Doctor Castle has been able to produce, by feeding diets deficient in Vitamin B, lesions in the spinal cord of dogs closely resembling those of pernicious anemia. At present, further observations are under way upon the therapeutic aspects of this problem.

Doctor Heath has, with Miss Daland, made prolonged studies of the reticular material in red cells appearing in the remission in pernicious anemia, or in response to bone marrow activity, and these workers are now carrying this fundamental problem further.

Dr. Maurice B. Strauss with Doctor Castle is carrying out an investigation of the anemias of pregnancy with particular reference to the incidence of achlorhydria.

On the first of September, Dr. Chester S. Keefer was appointed Associate Physician to the Thorndike Laboratory and Assistant Professor of Medicine in Harvard

Medical School. Doctor Keefer has already done work of importance in this field and has recently published papers concerning studies of dietary anemias made during the past year in China. With him comes Doctor Yang as National Research Fellow of China, and together they are undertaking studies of certain types of anemia, the relationship of edema to anemia, and the significance of jaundice in pernicious anemia.

Dr. Claude E. Forkner, recently appointed Assistant Physician brings to the Thorndike the advantages of study at the Rockefeller Institute and in Germany. With the assistance of Dr. McNair Scott, he is undertaking, in conjunction with Doctor Minot, studies of various therapeutic measures in leukemia.

Dr. F. H. L. Taylor, a trained organic and physical chemist, is working on various problems in collaboration with Doctor Forkner, Doctor Jackson, Doctor Castle and Doctor Marlowe, beside undertaking studies of his own. The rate of progress of these several investigations has been materially aided through the point of view brought to bear by Doctor Taylor.

#### SECTION OF THE THORNDIKE LABORATORY CONCERNING CARDIO-VASCULAR DISEASE.

The work of the section of the Thorndike Laboratory which is devoted to the study of cardio-vascular diseases has been mainly investigative during the past year. Considerable time and energy has been spent on routine observations and the study of patients with obscure clinical manifestations in various parts of the main hospital. The separation of research from clinical observations and the study of patients often is difficult. A consultation or a routine electrocardiogram may give the impetus toward a fundamental discovery.

##### *I. Investigations. Completed or in Progress.*

Continuous effort has been made to shed light on various obscure aspects of arterial hypertension and the mechanisms of circulatory failure. These two problems, because of their practical significance and their bearing on more basic general principles, stand at the center of interest among the numerous problems of the larger field of circulation.

## A. — Arterial Hypertension and Vascular Problems.

An extensive investigation of the mechanism of the circulation in the various types and stages of hypertension has been completed in collaboration with Dr. Laurence B. Ellis. For the first time, with the aid of instruments of precision recently developed, a complete picture of the pathological physiology of this morbid condition has been given. The knowledge gained through this investigation has an important bearing on the treatment of hypertension.

In collaboration with Dr. George P. Robb and Dr. Laurence B. Ellis, extensive investigations have been completed on the effects of histamine, acetylcholine, and sodium nitrite on the normal circulation and on the circulation in arterial hypertension. An understanding of the mechanism of the action of these substances is important in a number of normal and morbid states of the human body. Such knowledge as far as man is concerned has heretofore been lacking. This study yielded a number of significant observations.

A statistical study of the age, sex incidence and symptomatology of over a thousand cases of arterial hypertension was completed in collaboration with Dr. Joseph E. Riseman, former volunteer worker. The practical significance of these studies is self-evident.

A quantitative study of the capillary bed of the surface of the skin in normal subjects, in arterial hypertension and in arteriosclerosis was completed in collaboration with Dr. Donald Frazer, a former tutorial student of Harvard Medical School. This study represents continued effort to separate the etiology, hypsiology and morphology of arteriosclerosis and of arterial hypertension, two morbid conditions confused at present.

In collaboration with Dr. Laurence B. Ellis, an extensive study of the vasomotor disturbances in hemiplegia was reported before the Society of Clinical Investigation. This condition offers an ideal opportunity, unfortunately provided by nature, to study the effect of lesions of the vasomotor centers. Important light has been shed through this work on the central regulation of the peripheral circulation in subjects with normal blood pressure and with arterial hypertension. Dr. William Raab, a Rockefeller Research Fellow from the University of Vienna, has investigated the cerebral blood flow in patients with arterial hypertension.

The state of the autonomic nervous system was studied in a group of patients with arterial hypertension and compared with a control group in collaboration with Dr. Arthur Patek, a former tutorial student of Harvard University.

The role of the blood potassium, calcium, inorganic phosphorus and cholesterol in arterial hypertension were studied in collaboration with Mr. Alfred Weinstein. These investigations help to clarify the etiology of arterial hypertension.

In collaboration with Dr. Dudley Merrill and Dr. Logan Roots, former tutorial students of Harvard Medical School, cross sections of the arterial tree of the extremities in patients with arterial hypertension and in a control group were studied by arteriography.

With Dr. Laurence B. Ellis and Dr. George P. Robb, the functional capacity and certain vascular responses of the kidneys in patients with various types of hypertension is being studied. An attempt is also being made to study the blood flow through the normal and pathological kidney in man. This study attempt, for the first time, has already yielded a few observations of fundamental significance.

Continued efforts have been made by Dr. David Davis to study the nutrition of the coronary artery. It is expected that his work will explain the mechanism of coronary sclerosis. Various injection methods have so far failed to reveal uniformly the vasa vasorum of the coronary arteries.

#### B.—The Mechanism of Circulatory Failure.

The mechanism of the circulation was studied with Dr. Laurence B. Ellis in patients with rheumatic heart disease before and after the administration of digitalis. The concept formulated as a result of this investigation will aid in clarifying problems actively studied by many, both in America and Europe. As a continuation of this study and of several other studies conducted during the past five years, the blood flow, the lactic acid of the blood, and other aspects of the circulation before and following exercise in patients with various types of cardiovascular disease is being studied by Doctor Ellis and Doctor Weiss.

Dr. George P. Robb is engaged in the study of various forms of cardio dyspnea. It is hoped that, with the

knowledge gathered from these series of investigations, a new concept of the mechanism of circulatory failure will emerge which will be based directly on quantitative observations on man rather than on hypothetical assumptions. The significance of such a central concept does not require elaboration.

### C.—Miscellaneous Problems.

In addition, significant problems are often suggested by clinical experience. Some of these observations may stand isolated for a long time; others gain significance when confirmed by repeated observations. Some of these studies are as follows:

Dr. Laurence B. Ellis and Doctor Weiss have completed a study of the mechanism of the circulation in the presence of arteriovenous fistula. They have also completed a study of the regulatory functions of the peripheral circulation in a group of patients with complete auriculo-ventricular block. They are engaged at present in studying the nature of a heretofore undescribed clinical syndrome, *i. e.*, a syndrome similar to that of Raynaud's Disease which is produced by an arterio-sclerotic condition.

Dr. David Davis is making an extensive correlation of the clinical course and the autopsy findings of patients who died from rheumatic fever. The purpose of these studies is to establish the natural history of rheumatic fever.

Dr. Laurence B. Ellis has used the records of the Electrocardiographic Department for a study of complete heart block and has also made some observations on the effect of histamine on the T-wave of the electrocardiogram. Dr. J. M. Faulkner is collecting evidence to form a basis for differentiating between Sydenham's Chorea and Hysterical or other forms of chorea by means of the electromyogram. He has also collected a series of observations on the use of tincture of stramonium in the treatment of chorea, and has begun a large scale study in collaboration with Drs. E. H. Place, W. R. Ohler and Burton Hamilton with the object of establishing the incidence and clinical identity of the "Scarlet fever heart."

### II.—Routine Activities.

The main routine activities of this department consist of the electrocardiographic studies of patients. In

addition to this, the facilities of this department have been utilized for the study of cases with unusual and not well understood clinical manifestations, at the request of visiting physicians and surgeons. Numerous cases with peripheral vascular diseases, with circulatory asthenia, and disturbances of the autonomic nervous system have been investigated.

#### THE ELECTROCARDIOGRAPH LABORATORY.

During the past year there have been taken 1,850 routine clinical electrocardiograms. In addition, about twenty experiments involving the use of the electrocardiograph have been carried out. These have consisted chiefly of the investigation of the action of various drugs such as atropin, adrenalin and histamine on the heart or on a particular abnormal rhythm. Electromyograms have been done on ten patients with different types of tremors. The use of the string galvanometer for the graphic registration and differentiation of various types of tremors is largely due to the work of Dr. Stanley Cobb, and the new Neurological Wards are the first to be especially equipped for the recording of electromyograms. The taking of electromyograms as a routine diagnostic procedure in certain neurological cases with tremors will probably constitute a small but important part of the work of this laboratory. Further clinical investigation along these lines is contemplated.

The figure of 1,850 routine clinical electrocardiograms shows a marked increase over the two previous years (1,068 total for 1929 and 995 total for 1928). This increase is due in part to an increased interest and appreciation of the value of the electrocardiograph on the part of the House Officers, and in part to the speedier and therefore more valuable service which has been effected. By taking the records directly on bromide paper instead of using film from which prints are made, the time required to produce a finished record has been cut in half, with a saving in cost of materials of over 75 per cent. The end product is exactly as useful although not always as finished looking as a print taken from film.

A special electrocardiograph requisition blank has been instituted on which the House Officers state, in addition to the patient's name and age, whether they have had digitalis within two weeks or not, as well as the

diagnosis and outstanding clinical features of the case. This blank becomes a permanent part of the file in which the electrocardiographic diagnoses are recorded and has proved of great value in correlating the galvanometric findings with the clinical data.

We have for the first time this year taken records on patients in the Out-Patient Department instead of asking them to come to the laboratory. Under the old system the long and circuitous trip from the Out-Patient Department to the laboratory proved such an insurmountable obstacle to sick and ignorant patients that many were "lost in transit."

The opening of the new Medical Building which is completely 'wired' for electrocardiography has added greatly to our facilities for this service. An economical and efficient arrangement has been made by carrying over a cable from the connections on Ward T to the new building, thus making it possible to obtain in the old laboratory electrocardiographs on patients in the new ward.

We are looking forward with great pleasure to the advent of the new portable Sanborn electrocardiograph which has been ordered and will be delivered before the end of the year. This is a simpler and sturdier machine, in many ways more satisfactory for clinical use. It can be used in the laboratory to take electrocardiographs on distant wards or can be wheeled directly to the ward like a portable X-ray machine, and records taken entirely independent of the wiring system. The old Hindle machine has certain advantages for experimental use and will continue to be available for that purpose.

#### DIVISION OF THE THORNDIKE LABORATORY CONCERN- ING CANCER AND ALLIED DISORDERS, AND THE SUB-DIVISION, CHEMISTRY.

Under the general direction of Dr. Henry Jackson, Jr., in the Thorndike Laboratory, studies have been continued on malignant disease. Progress is necessarily slow, the field is difficult and far from untouched. The subject may be attacked from the angle of animal tumors on the one hand or of human material on the other. Our approach has been from both directions, but we have concentrated most of our efforts on human tumors and on the clinical study of cases of malignant disease in the wards.

There are four requisites to the adequate study of cancer and allied disease: (1) suitable material; (2) adequate laboratory facilities; (3) a highly trained chemist; (4) a highly trained pathologist, sympathetic with the general investigative program and himself actively interested in it. In all respects we have been unusually fortunate.

Through Doctor Jackson's association, in a clinical capacity, with the Collis P. Huntington Memorial Hospital, the Pondville Hospital and the Beth Israel Hospital as well as the Boston City Hospital, he has been able to command a very great amount of clinical material. The "average case" of malignant disease offers no great opportunity for advanced study other than the accumulation of clinical statistical data. It is to the unusual case — the border line condition — that we must often look for opportunity to make advances, and it is only by the accumulation of such material, often from several sources, that such cases come under our control. That various clinics should be inter-related in some such manner is of the utmost importance and most advantageous to all concerned. There results a unification rather than a diffusion of effort.

Dr. F. H. L. Taylor, a Ph. D. chemist, has been of the utmost value to the group. Many clinical problems arise, the solution of which is beyond the abilities of the usual well trained laboratory student. The constant availability of a highly trained chemist could hardly be dispensed with.

Dr. Frederic Parker, Jr., of the Pathological Department, is so closely linked with our cancer studies that all papers are being published under his name as well as under Doctor Jackson's. We would emphasize the importance of having such a trained pathologist cooperate in the work. One can hardly make a step into the field of malignant disease without appealing to the pathologist, and the only pathologist of real value in such a progress is one whose interest lies in that particular field and whose time is sufficiently his own,—that he can direct his own efforts uninterruptedly to the study at hand.

As to the work actually being carried out, the chemical metabolism of tumors is still being investigated, following out our already published work of last year. Various organic chemicals are being prepared and their effects on the bone marrow of animals is being studied. The extraordinary results following the administration

of a certain chemical to a case of acute leukemia last year is the stimulus for this work. These preparations are being made by Dr. F. H. L. Taylor. The technical side of the experiments is in charge of Miss Helen Curtis.

The manner in which radio active substances affects malignant disease is as yet uncertain. Experiments are being carried out in hopes of further clarifying this most important question. The method used is original with us and involves apparatus of an intricate nature. It is approved by Dr. William Duane, Professor of Bio-physics, and is made possible through the generosity of the Huntington Memorial Hospital, from whom we obtain the radon needles used in the work. Doctor Parker, Doctor Taylor, Miss Curtis and Miss Duane are all participating in this work.

The blood picture of Hodgkin's Disease and other types of malignant lymphoma are being carefully studied in a relatively large series of carefully selected cases. From both the diagnostic and the prognostic viewpoint such studies are of interest and of value to the general practitioner. A parallel series is being followed through on cancer cases, for it should be recognized that in recent years almost every case of malignant lymphoma has received large doses of X-ray and this may easily affect the blood picture. In this study we have been greatly helped by the technical assistance of Miss Helen Curtis and Miss Marion Duane.

The relation of Hodgkin's Disease to tuberculosis is being studied statistically, bacteriologically and immunologically. Dr. James M. Bethea, a former House Officer, analyzed with us the pathological findings in 126 cases of lymphoma, as contrasted with 50 cases of pernicious anemia and 400 cases of cancer. The results of these studies are to be published shortly. Doctor Parker, with the assistance of Miss Curtis and Miss Duane, is carrying out bacteriological investigations of all "malignant lymphoma" specimens received from biopsy. Cultures are made anaerobically, and several hundred guinea pigs, pigeons and rabbits have been injected with these lymph nodes in an effort to solve the question — Is Hodgkin's Disease infectious? Under direction of Doctor Jackson, Dr. Greene FitzHugh did a large number of tuberculin tests with human, bovine and avian tuberculin on our cases of malignant lymphoma. The results of these studies are about to be published. Doctor Taylor is also carrying on a strain

of rabbit cancer to be used for experimental purposes. Doctor Rinehart is studying methods of staining blood cells and tumor cells.

Such are the laboratory studies being carried out. Clinically cases are being carefully followed and studied — for in the natural history of a disease one can often find clues to its nature and to its cure.

#### INFECTIOUS DISEASE UNIT OF THE THORNDIKE LABORATORY.

The advances made during the past fifty years in knowledge concerning the etiology, pathology and treatment of infectious diseases have been stupendous. There still remain, however, many problems which are obscure and many of these have to do with diseases of patients who are admitted to the medical wards, rather than to the contagious pavilions. Information in regard to the mechanism of infection and recovery in lobar pneumonia, the effective treatment of subacute bacterial endocarditis and the etiology of acute rheumatic fever and of infectious arthritis, would furnish the physician with powerful weapons towards effective therapeutics, and the opportunity of obtaining information of this nature would be ideal in an institution as large as the Boston City Hospital, if the proper organization were provided.

For many years the Pathological Laboratory has carefully investigated many individual interesting cases, but concerted effort in one disease or group of diseases has been impossible because of the pressure of routine bacteriology and serology. The Pneumonia Service, under the guidance of Doctor Locke, contributed many interesting and valuable observations during the four years of its existence (1919-1923). In 1925, through the cooperation of the Department of Hygiene, Harvard Medical School, and the Trustees of the Boston City Hospital, a salaried resident became available for the purpose of studying various specific serums as means of treatment of lobar pneumonia. Through the winter of 1928-1929, the men in this position, on account of the routine work in the administration of sera, were able to add but little other than facts concerning the effectiveness of these specific sera. With the organization of the Thorndike Laboratory in 1923, the bacteriologic and immunologic problems of this group were

delegated to Doctor Nye who was assigned one technical assistant. Doctor Nye has conducted investigative work relative to the bacteriology of pernicious anemia, rheumatic fever and associated problems, and numerous papers have been published. Although certain honest attempts were made during the ten years prior to the fall of 1929 to make use of the opportunities offered on the medical wards of the hospital, the work was sporadic and more or less ineffectual, due to the lack of workers.

During the spring of 1929, plans were made by Doctor Minot to enlarge the work on infectious diseases at the Thorndike Laboratory. Doctor Sutliff was placed on the Staff of the Thorndike and was associated with Doctor Nye. Doctor Finland was assigned to the unit full time, and Doctor Beebe, a Thorndike resident, part time. Another Thorndike technician was delegated, together with one, half time. Because of the experience and interest of Doctors Sutliff and Finland in regard to lobar pneumonia, it was decided that the majority of time was to be devoted to the study of problems concerned with this disease. The pneumonia resident was made a member of the Thorndike Staff and was assigned to this infectious disease unit. Provisions were made by the Trustees for a student assistant. Funds were also supplied by the Department of Hygiene, Harvard Medical School, for a technician to perform the routine bacteriologic work and for the purchase of certain supplies. Doctor Mallory of the Pathological Laboratory very kindly furnished space and media for this technician.

During the fall, winter and spring of 1929-1930 this unit saw 359 cases of suspected pneumonia on the various services and each case was carefully studied clinically, bacteriologically, and serologically. Suitable cases were treated with specific sera, supplied through the kindness of Doctor Felton of the Harvard Medical School and Doctor White of the Massachusetts Department of Public Health. Related investigative problems, such as type of specific skin reactions, and whole blood killing power in patients with pneumonia and in normals, and the therapeutic effect of convalescent sera, were completed. More fundamental studies on problems related to non-specific resistance were conceived and begun. In addition, the three older members of the unit did a considerable amount of teaching, in which particular emphasis was placed on different aspects of infectious diseases.

The personnel of the unit at present is: two Thorn-dike physicians (Doctors Nye and Sutliff), one Thorn-dike resident (Doctor Finland), pneumonia resident (Doctor Hunnicutt), student assistant (Doctor Steele), three full-time technicians, another half-time technician and one laboratory helper. The specific treatment of cases of Type I and II lobar pneumonia will be continued on the assumption that the majority of properly selected cases (non-alcoholic patients under fifty years of age and treated within four days of onset) can be cured, and a concerted attempt will be made to explain the results in those cases which fail to react favorably. Associated investigative problems, such as the cellular and serological reaction of serums and purulent accumulations during the course of lobar pneumonia, tests of the disappearance rate of horse protein and immune bodies injected intravenously in man, and the search for the distribution in various organs, particularly the lung, at post-mortem, of horse, protein and immune bodies injected intravenously in man during life, are in progress. Experimental and clinical work concerning infection and non-specific resistance is being continued. Teaching assignments are being carried on by the older men, and, in addition, a bimonthly clinic in conjunction with the medical services and Department of Bacteriology, Harvard Medical School, has been instituted, at which interesting or puzzling cases of infectious disease are presented and discussed.

It seems highly desirable that steps should be taken to ensure the permanency of an infectious disease unit. In order for the work to continue in an efficient manner provisions will have to be made so that all the members of this unit hold regular hospital positions paid in the routine way.

#### X-RAY AND PHOTOGRAPHIC DEPARTMENT.

The amount of work referred to our department continues to show a marked increase each year.

Our plans include the installation, this year, of an X-ray equipment in the Out-Patient Building, by which we hope to relieve the main department of about fifty cases a day. The time also has come when we must consider installing a therapeutic machine in the Out-Patient Skin Department. Approximately 80 per cent of all skin diseases are now being treated by X-ray,

and a treatment machine has become an essential requirement for this department.

In the past month we have changed our source of electrical supply from the Hospital plant to the Edison Electric Illuminating Company. The power from our own plant had shown quite a considerable amount of fluctuation as it was delivered to our department, which made it very difficult to be accurate in our exposure tables. By receiving the electricity from the Edison Company we are now assured of a constant source of electricity and most of the fluctuation troubles have disappeared.

Our new system of reporting cases to the various departments of the Hospital has been in use for about a year and has proven satisfactory. The reports are made out in duplicate on small cards, and each service pastes its report card into the clinical record, thus saving time which was formerly spent by internes in transcribing these reports by longhand into their records.

During the past year a Resident Radiologist was appointed. He is a graduate of our own department and is in charge of the service during the absence of the Visiting Physicians. He has taken over a great deal of the routine work, such as checking over supplies, supervising the care and upkeep of machines, and keeping track of the help. This allows the Director more time for his strictly professional duties.

The teaching demands in the department also have increased for the students of both Harvard and Tufts Medical Schools. We are also receiving many more graduate students than formerly. We feel that this increase in the demands for teaching is due largely to the volume and variety of cases which pass through our department.

Following is the statistical report of the X-Ray Department for the year:

#### DIAGNOSTIC CLINIC.

##### 1. *Routine Cases.*

Number of ward patients . . . . .	20,225
Number of out-patients . . . . .	15,719
Number of outside doctors' patients . . . . .	3,043
	<hr/>
Total number of patients . . . . .	38,987
	<hr/>
<i>Carried forward</i> . . . . .	38,987

*Brought forward* . . . . . 38,987

*2. Gastro-Intestinal Cases.*

Number of ward patients . . . . . 934  
 Number of out-patients . . . . . 407  
 Number of outside doctors' patients . . . . . 611

Total number of patients . . . . . 1,952

*3. Haymarket Square Relief Station.*

Number of patients . . . . . 1,289  
 Total number of patients . . . . . 1,289

*4. East Boston Relief Station.*

Number of patients . . . . . 693  
 Total number of patients . . . . . 693

*5. South Department.*

Number of patients . . . . . 122  
 Total number of patients . . . . . 122

Total number of ward patients . . . . . 23,263

Total number of out-patients . . . . . 16,126

Total number of outside doctors' patients . . . . . 3,654

Total number of diagnostic cases . . . . . 43,043

TREATMENT CLINIC.

*1. X-Ray Treatment Cases (New).*

Number of ward patients . . . . . 165  
 Number of out-patients . . . . . 205  
 Number of outside doctors' patients . . . . . 70

Total number of patients . . . . . 440

*2. X-Ray Treatment Cases (Old).*

Number of old patients returned . . . . . 1,599  
 Total number of patients returned . . . . . 1,599

*3. Radium Treatment Cases (New).*

Number of ward patients . . . . . 56  
 Number of out-patients . . . . . 2  
 Number of outside doctors' patients . . . . . 6

Total number of patients . . . . . 64

*4. Radium Treatment Cases (Old).*

Number of old patients returned . . . . . 16  
 Total number of patients returned . . . . . 16

*5. Radon Cases (New).*

Number of ward patients . . . . .	15	
Total number of radon patients . . . . .		<u>15</u>

*6. X-Ray and Radium Treatments (New and Old).*

Number of ward patients treated . . . . .	528	
Number of out-patients treated . . . . .	1,247	
Number of outside doctors' patients treated . . . . .	344	
		<hr/>
Total number of X-ray and radium treatments . . . . .		<u>2,119</u>

*7. Consultations and Examinations.*

Number of ward patients . . . . .	269	
Number of out-patients . . . . .	615	
Number of outside doctors' patients . . . . .	163	
		<hr/>
Total number of patients . . . . .		<u>1,047</u>

*8. X-Ray Treatments Given.*

Number of ward patients treated . . . . .	460	
Number of out-patients treated . . . . .	1,240	
Number of outside doctors' patients treated . . . . .	339	
		<hr/>
Total number of treatments (new and old) . . . . .		<u>2,039</u>

*9. Total Cases (Seen and Treated).*

Number of ward patients . . . . .	811	
Number of out-patients . . . . .	1,862	
Number of outside doctors' patients, . . . . .	507	
		<hr/>
Total number of cases seen and treated - . . . . .		<u>3,180</u>

*10. Total Number of All Patients.*

Number of all patients (diagnostic and treatment) . . . . .		<u>45,177</u>
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## NUMBER OF FILMS USED.

For routine cases . . . . .	65,102	
For gastro-intestinal cases . . . . .	11,366	
Dental films . . . . .	10,708	
At the South Department . . . . .	379	
At the Haymarket Square Relief Station . . . . .	3,003	
At the East Boston Relief Station . . . . .	724	
		<hr/>
Total . . . . .		<u>91,282</u>

## DEPARTMENT OF PHYSICAL THERAPEUTICS.

All cases treated in this department were referred from the Out-Patient Clinics and House Services, as this

department does not admit patients directly. At frequent intervals these patients were directed to report back to the respective clinics where they originated, for the purpose of recording their progress. Where special problems arose, personal consultations between the Visiting Men to the Department of Physical Therapeutics and those of other departments were held.

The Physician-in-Chief to the Department of Physical Therapeutics availed himself of the opportunities accorded to him by the cordial invitations of heads of other departments to participate in their conferences, thereby securing a better understanding of their physiotherapy needs.

During the year a mild epidemic of infantile paralysis occurred. These cases were housed in Ward A and taken care of by the Department of Pediatrics, the Bone and Joint Service and the Department of Physical Therapeutics. The latter equipped Ward A with necessary physiotherapy apparatus and technicians. This emergency service was continued in Ward A for about two and one half months. Following this period these patients were referred to the respective three Out-Patient Clinics.

The six months' periods of training for technicians has been carried on by the department as in the past. This instruction was given to the students in consideration of the services which they rendered to the department.

The head of the department conducted weekly conferences with the technicians and students for the purpose of adjusting departmental matters as well as enlightening them on recent progress made in the field of physical therapeutics. He also invited Visiting Men of other departments to address these conferences on subjects allied to this particular branch of medicine.

The statistical report is as follows:

Number of ward patients treated . . . . .	984
Number of out-patients treated . . . . .	3,345
Total number of individuals treated . . . . .	4,329
Number of visits of ward patients . . . . .	10,378
Number of visits of out-patients . . . . .	43,972
Total number of visits . . . . .	54,350
Total number of treatments . . . . .	132,486

#### DEPARTMENT OF IMMUNOLOGY.

The statistical report of the Department of Immunology from January 1, 1930, to January 1, 1931:

## Total number of patients:

In Out-Patient Department . . . . .	1,301	
In House . . . . .	152	
	—	1,453

Total number of visits to Out-Patient clinics . . . . . 11,329

Total number of visits of doctors to House patients . . . . . 276

## Curative and diagnostic inoculation:

In bronchial asthma, hay fever and other allergic conditions, chronic bronchitis, recurrent respiratory infection, furunculosis, acne, local tuberculosis, arthritis, etc.

Number of patients (including House patients) . . . . .	712
Number of visits (including House visits) . . . . .	8,546
Number of curative and diagnostic inoculations . . . . .	16,995

## Protective inoculation:

Against typhoid and paratyphoid — number protected . . . . .	117
Number of protective inoculations . . . . .	451
Number of visits . . . . .	451
Against diphtheria — number protected . . . . .	56
Number of toxin-antitoxin injections . . . . .	166
Number receiving the Schick test . . . . .	158
Number of Schick tests done . . . . .	165
Number of visits . . . . .	508

## Protective inoculation

Against scarlet fever — number protected . . . . .	52
Number of Dick toxin injections . . . . .	309
Number receiving the Dick test . . . . .	178
Number of Dick tests . . . . .	269
Number of visits . . . . .	746
Number of dog bite (or other animal bite) cases, investigated . . . . .	486
Number protected against rabies . . . . .	61
Number of protective antirabic injections . . . . .	830
Number of visits . . . . .	1,353

## Chemo-serum therapy:

Number of patients under treatment for neurosyphilis . . . . .	27
Number of visits of neurosyphilis patients . . . . .	448
Number of intravenous Arsphenamine injections . . . . .	179
Number of intradural Arsphenaminized serum injections . . . . .	41
Number of intramuscular bismuth injections . . . . .	81
Number of intramuscular mercury injections . . . . .	32
Number of lumbar punctures done for diagnosis . . . . .	18

## The Work of the laboratory:

Number of autogeneous vaccines prepared . . . . .	1,207
Number of Swift-Ellis and Ogilvie sera prepared . . . . .	41
Number of colloidal gold tests done . . . . .	62
Number of spinal fluid cell counts done . . . . .	26

From 261 specimens of blood taken from convalescent patients the following doses of sera were prepared and bottled for the South Department:

Convalescent measles sera . . .	634
Convalescent scarlet fever sera . .	124
Convalescent mumps sera . . .	23
Convalescent poliomyelitis . . .	3

— 784

These sera were used in treatment of, or protection against the above-mentioned diseases at the South Department.

### CLINICAL LABORATORIES.

The end of the year 1930 has seen the complete reorganization in the administration of laboratories that concern themselves with clinical pathology. In past years these laboratories have been divided into three groups: (1) The Clinical Laboratory. (2) The Blood Laboratory. (3) The individual service laboratories. These have been under the direction of separate individuals.

Those in charge of the Clinical Laboratory have subdivided their work into two classifications, one of which is Clinical and the other Laboratory. The directors of this laboratory have operated the Diabetic, Nephritic and Thyroid Clinics. They also have directed that laboratory work which came under the heading of "Clinical Laboratory." This consisted of special blood studies, chemistry determinations, more elaborate urine and stool examinations, and also the basal metabolism tests.

The work of the Blood Laboratory can be roughly divided into two groups: (1) Blood studies of a morphological nature. (2) Typing and cross typing of blood for transfusion. In connection with this feature this laboratory has maintained a large list of professional donors for use in this hospital and elsewhere.

The service laboratories have functioned entirely as separate units each in connection with its own particular service, and without any supervision of one person in regard to apparatus and equipment.

The amount of work done in these various laboratories during the year 1930 is listed as follows:

#### *Clinical Laboratory.*

Special chemical determinations for the House . . .	4,945
Special chemical determinations for the Out-Patient Department . . . . .	469

Basal Metabolism tests for the House . . . . .	707
Basal Metabolism tests for the Out-Patient Department . . . . .	748

The special chemistry determinations referred to consisted chiefly of blood chemistry. There have been numerous requests for various determinations of complicated nature that the laboratory was unable to carry out because of lack of space, proper equipment, and assistance.

*Blood Laboratory.*

House cases studied . . . . .	130
House cases completed . . . . .	274
Total . . . . .	<u>404</u>
Out-Patient Department complete blood examinations, . . . . .	270
Total blood examinations. . . . .	674
House complete bloods . . . . .	160
Total . . . . .	<u>834</u>
Number of consultations . . . . .	130
Number of typings . . . . .	469
Number of Wassermanns . . . . .	110
Number of donors . . . . .	460
Number of out-patients . . . . .	50
Number of these out-patients counted elsewhere . . . . .	15
Visits of out-patients . . . . .	270

The exact number of professional donors supplied cannot be stated, as the list has to be kept open for the use of house officers at times when the technicians are not present, and because donors are frequently sent for without being used.

SERVICE LABORATORIES.

Each service laboratory has carried out routine clinical pathological examinations as directed by the chief of each service.

During the year 1930 one new medical service was created in the Hospital. It was the duty of the Clinical Laboratory to assist them in finding suitable space for their laboratory and equipping it. At present every service in the Hospital has its own routine laboratory with the exception of the First and Second Surgical Services. It is planned that they shall be given a laboratory in the near future.

During the past year the Trustees have created a new position, "Director of the Clinical Laboratories." It has been his duty to bring together the old clinical laboratory and the old blood laboratory, and to make of them one unit. A new laboratory has been built in the basement of the new Medical Building which now houses this new unit. The new laboratory has spacious quarters and is excellently equipped. Considerable new and valuable apparatus has been added. In addition to seeing this new unit function properly, the director also has the duty of supervision of each of the service laboratories as to its apparatus and equipment.

At the end of the year this new unit has been brought together in its new quarters, and is ready to serve the Hospital in the capacity of a complete clinical and chemical laboratory.

#### PEDIATRIC DEPARTMENT.

Eleven hundred fourteen ward patients and 4,922 out-patients were treated in the Pediatric Service during the past year. Of the out-patients treated 3,651 were new patients this year. The out-patients made 9,476 visits to the Hospital. These out-patient figures include the number of baby hygiene cases, the figures on baby hygiene alone being 174 cases (of which 140 were new this year) and 713 visits.

#### DEPARTMENT OF ORAL SURGERY.

Following is a report of work done in the Oral Surgery Department for the year 1930:

Number of ward patients treated (old and new) ..	961
New ward patients treated . . . . .	936
Visits of ward patients . . . . .	1,518
Number of out-patients treated (old and new) . .	1,997
New out-patients treated . . . . .	1,334
Visits of out-patients . . . . .	3,159
Out-patients counted elsewhere . . . . .	1,027
Consultations . . . . .	798
Teeth extracted . . . . .	5,059
Supernumerary teeth removed . . . . .	2
Impacted teeth removed . . . . .	45
Novacaine anesthesia . . . . .	4,622
Nitrous oxide anesthesia . . . . .	101
Ether anesthesia . . . . .	17
Ethyl chloride anesthesia (local) . . . . .	57
Alveolar abscesses . . . . .	79

Alveolar abscesses incised on face . . . . .	37
Fractured jaws . . . . .	80
Osteomyelitis . . . . .	32
Spiculae and sequestra removed . . . . .	57
Cysts surgically removed . . . . .	27
Parotid gland abscess . . . . .	1
Carcinoma of jaw . . . . .	4
Carcinoma of tongue . . . . .	1
Cleft palate . . . . .	1
Closed opening into antra . . . . .	5
Leukoplakia . . . . .	3
Granuloma . . . . .	1
Necrosis of jaw . . . . .	3
Removal of foreign body . . . . .	1
Removal of non-malignant tumor . . . . .	2
Removal of large exostosed area on jawbone . . . . .	2
Ludwig's angina . . . . .	1
Hemorrhages stopped . . . . .	34
Stomatitis . . . . .	37
Vincent's infection . . . . .	98
Temporary fillings . . . . .	79
Treatments . . . . .	1,063
Prophylaxis . . . . .	621
Pemphigus . . . . .	2

## GASTRO-INTESTINAL SERVICE.

This clinic is steadily growing and developing. This year there were 1,893 out-patient visits compared with 1,422 last year and 772 two years ago. We have been much pleased with the results of holding the clinic twice a week, and of the appointment system for the patients.

We have had five or six regular trained workers throughout the year, one Visiting Physician, one junior Visiting Physician and three or four Assistants in Medicine. Two or three of the workers are present on Tuesdays, and three or four on Fridays. We are looking forward to a regular House Officer for the clinic. Our well-arranged and ample quarters always make a good impression on visitors from other clinics.

The work of the ulcer class under Doctor Jankelson has been continued, and has been much appreciated by the patients. The post-operative cases are among the most faithful of our class, probably because they realize the seriousness of ulcer. We have long felt that treatment during remissions is a crucial point, and often neglected. We believe that we can already see decidedly favorable results in warding off recurrent

attacks in this group. There will always be plenty of room for education of the poorer or less intelligent hospital patients.

The cases seen in consultation in the wards have always been very interesting, and very useful for teaching and study. We are grateful to our colleagues for this opportunity. The clinic would welcome many more digestive cases from all the medical and surgical services after discharge from the wards. Many of these patients greatly need further supervision and follow-up of a chronic digestive condition.

The following clinical research has been carried out through the year:

Dr. I. R. Jankelson has been studying a new Bilirubin Liver Function Test, which consists of injecting pure bilirubin into a vein and measuring the liver's power of excreting it in a given time.

Dr. P. B. Davidson has continued the use of a high vitamin treatment of a group of peptic ulcers without relying on frequent feeding or alkalis. Doctor Davidson has continued his study of the bacteriology of chronic ulcerative colitis, and the use of vaccines and filtrates in treatment.

Our studies of intragastric photography did not seem to warrant further use at this time of the very ingenious and interesting apparatus which was loaned to us.

Doctor White and Doctor Jankelson have reported their work with the ulcer class at the Annual Meeting of the American Gastro-Enterological Association in 1930, and also a series of gall bladder cases with hematemesis at the Annual Meeting of the American Association of Physicians in 1930.

The following figures represent the work of the clinic for the year:

Number of ward patients treated, or seen in consultation	176
Number of out-patient treated	600
Number of out-patient visits	1,893

#### SERVICE FOR TROPICAL DISEASES.

During the past year the following cases of tropical diseases were seen and treated by the Resident in consultation with the Visiting Physician:

Sprue . . . . .	3
Tinea saginata . . . . .	2
Tinea solium . . . . .	2
Oxyuris . . . . .	2
Tertian malaria . . . . .	1
Aestivoautumnal malaria . . . . .	1
Amoebic dysentery . . . . .	2
Trichiniasis . . . . .	3
Colitis . . . . .	6
Pellagra . . . . .	6
Scurvy . . . . .	1

In addition to these cases, the tropical service saw in consultation fourteen cases of suspected tropical diseases in which no further evidence of such disease was found.

Sixty stool specimens were examined for parasites and ova and ten specimens were collected for amœba.

Anayodin was employed in the treatment for cases of colitis. A cure was effected in one due to ameobic dysentery. A temporary good effect was secured in one case of mucous colitis and no effect was noted in two cases of colitis of unknown etiology.

In collaboration with the late L. Spencer Davis, studies were commenced on the presence of porphyrin in the urine of patients with pellagra and the effect of exposure of the skin of such patients to ultra-violet light. This work was abandoned upon the death of Mr. Davis.

In collaboration with Doctor Castle the nature of the deficiency in the gastric juice of patients with a blood picture of pernicious anemia was studied. Furthermore, an investigation was made of the nature of the deficiency producing a pernicious anemia blood picture in Sprue.

#### CARDIAC CLINIC.

Two hundred and twelve patients were treated in the Cardiac Clinic during the year 1930. Of these, 180 were new admissions. These out-patients made a total of 883 visits to the department. This is a definite increase both in new patients and in total visits over the preceding year.

The intensive follow-up work of chronic cardiacs discharged from the house and referred to this clinic has been continued and the supervision of this group has not only been of benefit to the patients but also has been of economic advantage to the Hospital.

Certain types of cardiac disease have been chosen by different members of the clinic for special study. This work has only recently been inaugurated, but in the course of time much benefit to the patient as well as to the physicians working in the clinic should accrue from this intensive study of special groups.

Consultations with members of the Staff and House Officers and practising Physicians have been carried on as in former years.

The following of the prenatal group by periodic visits to the clinic has undoubtedly been a safeguard to this type of patient.

The coöperation of the various out-patient departments with this clinic has been most gratifying.

#### CIRCULATORY CLINIC.

During the year 1930 the number of patients treated in the Circulatory Clinic was 789. Four hundred forty-seven of these were new patients. These out-patients made a total of 4,821 visits to the clinic.

#### THYROID CLINIC.

As previously reported, the medical and surgical thyroid out-patient groups combined into a single clinic on October 18, 1929, meeting regularly every Friday morning at eleven o'clock. The clinic is headed by Doctors Cochrane, Ohler and Ullian, assisted by Doctors Abramson and Berlin. Since this reorganization, making possible an immediate medical and surgical consultation, the attendance has steadily increased as shown by the following figures:

During 1929, 52 patients made 154 visits. However, 62 of these visits were made prior to the establishment of the combined clinic, while 92 visits occurred in the remaining ten weeks of that year.

In 1930, 544 visits were made by 149 patients, that is, an increase of 390 visits and 97 patients over the preceding year.

Patients referred for admission to medical services in the Hospital have been under the supervision of Doctors Ohler and Ullian; similarly all surgical cases have been assigned by the Staff to Doctor Cochrane. The handling of these patients by a small group has made possible more careful study, and more successful treatment. It has resulted in a well satisfied group of patients as shown by the steady increase in numbers.

During the eight years preceding the assignment of all thyroid cases to Doctor Cochrane the Hospital records show that 26 patients were operated upon with four deaths or approximately 15 per cent mortality. There is in process of publication a report of 100 unselected thyroid operations showing a mortality of but 2 per cent.

#### DEPARTMENT OF SOCIAL WORK.

The private committee continued to supplement the work of the Hospital in providing a measure of social after care, follow-up and recreational service for groups of patients.\*

#### STATISTICS.

Our fifteen case workers gave definite social service outside the Hospital to about 900 patients a month, of whom 541 were socially recorded, and paid a total of 5,183 visits to homes and agencies in the interests of patients. The monthly average of our paid Staff was  $22\frac{1}{2}$ ,  $15\frac{6}{12}$  of these were social case workers. In addition to the patients noted above our recreational workers in the main Hospital and South Department, supplemented by volunteers, gave some form of recreation, games, occupational therapy, reading matter to many hundreds of ward children and others.

#### EXPENDITURES.

Through the Hospital budget a total of \$26,826.87 was expended; \$24,684.80 of this was for case workers' salaries; \$2,142.07 for car fare, telephone rental, furnishings, etc. In addition \$160.50 was expended from the interest of the Perkins Fund to purchase surgical apparatus for a few ward patients. From the interest of the Hettie Lang Shuman Memorial Library Fund, we expended \$75.05 for new books for our library service.

Through the private committee a total of \$14,865.90 was expended for salaries, car fare, for privately paid workers, publicity, etc. In addition we received from private sources \$2,656.72 for special relief of certain needy patients as follows:

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\* A separate report on some phases of the work during 1930 is in course of preparation and can be had on application to the department.

From the Committee of the Permanent Charity

Fund, Inc. . . . .	\$1,496 22
Raised by case workers for individual patients . . . . .	940 50
Special donations for needy patients . . . . .	60 00
Contributed for children's recreational work . . . . .	161 00

#### PRIVATE COMMITTEE.

Mrs. George H. Monks, Chairman.

Mrs. Reid Hunt, Secretary.	Mrs. George R. Minot.
Mrs. Edward H. Bradford.	Mrs. I. A. Ratshesky.
Mrs. Charles A. Coolidge.	Mrs. William H. Robey.
Mrs. Thomas M. Devlin.	Mrs. John Rock.
Mrs. Henry Ehrlich.	Mrs. George L. Tobey.
Mrs. Charles C. Lund.	Mrs. Soma Weiss.

Mrs. Ernest B. Young.

Mr. William C. Endicott, Treasurer, 71 Ames Building,  
Boston.

Miss Gertrude L. Farmer, Executive Director.

#### HOSPITAL SCHOOL.

The annual report of the school year 1929-1930 to the Boston Public School Committee, under whose supervision the Hospital School is conducted, states that the total enrollment was 302. The average number of pupils belonging was 51. The number of pupils taught daily was 33. Twelve pupils who were patients in the Hospital for two months or longer on June 26, 1930, were promoted to the next higher grade.

The summer session for July and August had an average attendance of 53.

#### SOUTH DEPARTMENT.

During the thirty-six years that the department has been in operation, 84,065 patients have been received, nearly all ill with an infectious disease.

#### HAYMARKET SQUARE RELIEF STATION.

This Relief Station has been in commission twenty-nine years. In these twenty-nine years, 898,313 patients have been treated. The number of patients treated during the first year was 20,150, and during the past year 28,701. These patients received 29,677 days' treatment.

#### EAST BOSTON RELIEF STATION.

In the twenty-two years that the East Boston Relief Station has been in operation, 257,447 patients have

been treated. For the year ending December 31, 1930, 12,757 patients were treated. These patients received 33,493 days' treatment.

#### CONVALESCENT HOME.

During the forty years that the Convalescent Home has been in operation, 13,739 patients have been benefited.

The number of patients treated during the past year was 357, who received 5,582 days' treatment.

#### WEST DEPARTMENT.

The West Department, after being used by the United States Government for ten years as General Hospital No. 10 for war veterans, was returned to the Boston City Hospital Trustees in November, 1918.

The buildings are in fairly good condition and are unfurnished. Watchmen are caring for the plant until its future use is decided upon.

#### SANATORIUM DIVISION.

The Sanatorium Division (formerly the Boston Sanatorium) became a department of the Boston City Hospital on April 1, 1927. The annual report of this department is published in a separate volume.

#### CHANGES IN THE MEDICAL AND SURGICAL STAFF.

The following members of the Visiting Staff resigned their positions: Edward D. Churchill, M. D., Associate Surgeon and Director of Surgical Research; Samuel H. Wilkins, M. D., Visiting Ophthalmic Surgeon; Gerald L. Doherty, M. D., Assistant to the Visiting Surgeons; Frederick H. Salls, M. D., Assistant Visiting Ophthalmic Surgeon; William T. Haley, M. D., Assistant Visiting Surgeon for Diseases of Ear and Throat; Chester L. Glenn, M. D., Junior Visiting Pediatrician.

The following promotions were made: Harold W. Dana, M. D., from the position of Assistant Visiting Physician to that of Visiting Physician; Burton E. Hamilton, M. D., from the position of Junior Visiting Physician to that of Assistant Visiting Physician; Walter T. Garfield, M. D., from the position of Assistant Visiting Physician for Diseases of the Skin to the position of Visiting Physician for Diseases of the Skin; Bernard Appel, M. D., from the position of Junior

Visiting Physician for Diseases of the Skin to the position of Assistant Visiting Physician for Diseases of the Skin; Girdie W. Dickinson, M. D., and Arthur J. Cole, M. D., from the position of Assistant Visiting Physician for Physical Therapeutics to that of Visiting Physician for Physical Therapeutics.

The following appointments were made: Edwin A. Locke, M. D., to the position of Chief of the Fourth Medical Service; William D. McFee, M. D., Visiting Physician for Physical Therapeutics; Stanley J. G. Nowak, M. D., Associate Surgeon, Fifth Surgical Service; James W. Sever, M. D., Associate Surgeon, Sixth Surgical Service; Mark H. Rogers, M. D., Associate Surgeon, Sixth Surgical Service; Norman A. Welch, M. D., Junior Visiting Physician; Richard P. Stetson, M. D., Junior Visiting Physician; Bernard I. Goldberg, M. D., Junior Visiting Physician; Laurence B. Ellis, M. D., Junior Visiting Physician; Theodore L. Badger, M. D., Junior Visiting Physician; W. Harry Gullifer, M. D., Assistant Visiting Oral Surgeon; Russell F. Sullivan, M. D., Assistant to the Visiting Surgeons; Abraham N. Caplan, M. D., Junior Visiting Pediatrician; Tracy J. Putnam, M. D., Associate in Neurosurgery; Samuel M. Pearl, M. D., Assistant Visiting Physician for Immunology.

Titles of members of the Visiting Staff were changed as follows: George R. Minot, M. D., from "Director of the Thorndike Memorial Laboratory" to "Director of the Thorndike Memorial Laboratory, Director of Second Medical Service, Director of Fourth Medical Service"; Herbert H. Howard, M. D., from "Visiting Surgeon" to "Visiting Surgeon for Urology"; Donald Munro, M. D., from "Visiting Surgeon" to "Visiting Surgeon for Neurosurgery"; Augustus Riley, M. D., from "Assistant Visiting Surgeon" to "Assistant Visiting Surgeon for Urology." "The titles of the Neurological Department have been changed by striking out the words, "Physicians for Neurology" and inserting the word, "Neurologists."

#### ASSISTANTS TO THE VISITING STAFF.

The following temporary appointments were made for the term of one year:

To the position of Assistant in Medicine: Beginning January 1, 1930: William B. Castle, M. D., Wheelan D. Sutliff, M. D., Stacey R. Mettier, M. D., Arthur A.

Marlow, M. D., Richard T. Beebe, M. D., Albert G. Young, M. D., Maxwell Finland, M. D., George E. Lewis, M. D., Laurence B. Ellis, M. D., Clark Heath, M. D., I. R. Jankelson, M. D., Samuel Morein, M. D.

Beginning April 18, 1930: Morton S. Stern, M. D., to succeed Herbert S. Saver, M. D., in teaching service for the First Medical Service.

On March 7, the service of Norman A. Welch, M. D., as Assistant in Medicine was ended by his appointment to the position of Junior Visiting Physician, and on June 20, the services of Bernard I. Goldberg, M. D. and Laurence B. Ellis, M. D. were ended by their appointment to the position of Junior Visiting Physician.

Abraham L. Pierson, M. D., Assistant to the Third Medical Service for Special teaching work, left in March, 1930, and Harry Freeman, M. D., became Assistant to the Third Medical Service for the term, March to July, 1930.

To the position of Assistant in Surgery: Beginning February 1, 1930: Herbert G. Dunphy, M. D.

Beginning March 1, 1930: J. William Burke, M. D., Irving W. Parkhurst, M. D.

Beginning April 1, 1930: Thomas H. Peterson, M. D., (for the Sixth Surgical Service).

Beginning May 1, 1930: Henry R. Gilbert, M. D.

Beginning November 1, 1930: John E. Hopkins, M. D.

To the position of Assistant in Gynecology and Obstetrics: David Rose, M. D., beginning January 1, 1930.

To the position of Assistant in Neurology: H. Houston Merritt, M. D., beginning January 1, 1930.

To the position of Assistant in Dermatology: Fred N. J. Dubé, M. D., beginning June 6, 1930. Doctor Dubé served only for the period of a month.

#### PUBLICATIONS OF THE STAFF.

Following is a list of the publications of the Hospital Medical and Surgical Staff during the year 1930:

"Agranulocytic — Purpuric — Hemorrhagic Reaction After Neo-Arsphenamine," by Bernard Appel, M. D. *Urologic and Cutaneous Review*, February, 1930.

"The Effect of Irradiated Ergosterol on the Composition of Gastric and Pancreatic Juices," by Walter Bauer, M. D., Alexander Marble, M. D. and Stephen Maddock, M. D. *American Journal of Medical Sciences*, Vol. 181, p. 399, March, 1931.

"Early Changes Produced in Dogs by the Injections of a Sterile Active Extract from the Anterior Lobe of the Hypo-

physis," by E. B. Benedict, M. D., T. J. Putnam, M. D., and H. M. Teel, M. D. *American Journal of Medical Science*, Vol. CLXXIX, No. 4, p. 489, April, 1930.

"Gall Bladder Surgery," by Horace Binney, M. D. *Journal of the National Medical Association*, January-March, 1930.

"Reciprocal Beating of the Heart; an Electrocardiographic and Pharmacological Study," by H. L. Blumgart, M. D., and S. L. Gargill, M. D. *American Heart Journal*, Vol. 5, p. 424, April, 1930.

"The Dynamics of the Circulation in Patients with Coarctation of the Aorta," by H. L. Blumgart, M. D., J. S. Lawrence, M. D., and A. C. Ernsthene, M. D. Proceedings of the XXII Annual Meeting of American Society of Clinical Investigation, Atlantic City, May 5, 1930; *Journal of Clinical Investigation*, Vol. 9, p. 14, August, 1930.

"Studies on the Velocity of Blood Flow, XIII. The Circulatory Response to Thyrotoxicosis," by H. L. Blumgart, M. D., S. L. Gargill, M. D., and D. R. Gilligan, M. D. *Journal of Clinical Investigation*, Vol. 9, p. 69, August 20, 1930.

"Studies on the Velocity of Blood Flow, XIV. The Circulation in Myxedema with a Comparison of the Velocity of Blood Flow in Myxedema and Thyrotoxicosis," by H. L. Blumgart, M. D., S. L. Gargill, M. D., and D. R. Gilligan, M. D., published in the *Journal of Clinical Investigation*, Vol. 9, p. 91, August 20, 1930.

"Emergency Surgery," by Joseph H. Burnett, M. D. *The Apollonian*, July, 1930.

"Functions of the Radiological Department of a Large Municipal Hospital," by P. F. Butler, M. D. *American Journal of Surgery*, May, 1930.

"Further Observations on the Aetiological Relationship of Achylia Gastrica to Pernicious Anemia," by W. B. Castle, M. D. *Lancet*, Vol. 218, p. 1062, May 17, 1930.

"Further Observations on the Etiological Relationship of Achylia Gastrica to Pernicious Anemia," by W. B. Castle, M. D., W. C. Townsend, M. D., and C. W. Heath, M. D. Proceedings, XXII Annual Meeting of the American Society of Clinical Investigation, Atlantic City, May 5, 1930; *Journal of Clinical Investigation*, Vol. 9, p. 2, August, 1930.

"Observations on the Etiologic Relationship of Achylia Gastrica to Pernicious Anemia, III. The Nature of the Reaction Between Normal Human Gastric Juice and Beef Muscle Leading to Clinical Improvement and Increased Blood Formation Similar to the Effect of Liver Feeding," by W. B. Castle, M. D., W. C. Townsend, M. D., and C. W. Heath, M. D. *American Journal of Medical Science*, Vol. 180, p. 305, September, 1930.

"The Relief of Obstruction to the Circulation in a Case of Chronic Constructive Pericarditis," by Edward D. Churchill, M. D., with Paul D. White, M. D. *New England Journal of Medicine*, 202:165, January, 1930.

"Forced Drainage of the Central Nervous System—its Effect on the Blood and on the Cerebrospinal Fluid," by Stanley Cobb, M. D., with F. Fremont-Smith, M. D., and T. J. Putnam, M. D. *Archives of Neurology and Psychiatry*, 23:219, 1930.

"The Effects of Anemia on the Cerebral Cortex of the Cat," by Stanley Cobb, M. D., with E. Gildea, M. D. *Archives of Neurology and Psychiatry*, 23:876, 1930.

"Report of a Case of Progressive Athetosis with Lesions in the Basal Ganglia," by Stanley Cobb, M. D., with B. Crothers, M. D. *New England Journal of Medicine*, 203:213, 1930.

"Histopathology of Different Types of Electric Shock on Mammalian Brains," by Stanley Cobb, M. D., with L. R. Morrison, M. D. *Journal of Industrial Hygiene*, 12:324, 1930.

"Neurological Unit at the Boston City Hospital," by Stanley Cobb, M. D. *Bulletin of the Harvard Medical School Alumni Association*, October, 1930.

"The Nature of the Material Effective in Pernicious Anemia," IV, by E. J. Cohn, M. D., T. L. McMeekin, M. D., and G. R. Minot, M. D. *Journal of Biological Chemistry*, 87:49, 1930.

"The Nature of the Substance Effective in Pernicious Anemia," by E. J. Cohn, M. D., T. L. McMeekin, M. D., and G. R. Minot, M. D. *Transaction of Association of American Physicians*, 45:343, 1930.

"Primary Torsion of the Great Omentum," by Emilio D'Errico, M. D. *New England Journal of Medicine*, December 11, 1930.

"London and Copenhagen," by John G. Downing, M. D. *New England Journal of Medicine*, Vol. 203, No. 17, pp. 848–853, October 23, 1930.

"Cavernous Hemangioma Trauma," report of a case by John G. Downing, M. D., and G. K. Mallory, M. D. *Archives of Dermatology and Syphilology*, September, 1930, pp. 414–422.

"Biological Abstracts," published by the University of Pennsylvania, 1930; Albert Ehrenfried, M. D., collaborator.

"The Local and Systemic Effects of Arterio-Venous Fistula on the Circulation in Man," by L. B. Ellis, M. D., and Soma Weiss, M. D. *American Heart Journal*, 5:635, June, 1930.

"Serum Pigmentation and Kinetics of the Latent Jaundice of Lobar Pneumonia," by Norman W. Elton, M. D. *Journal of the Detroit College of Medicine and Surgery*, 2:34, July, 1930. (Report of work in progress.)

"Erythrocyte Sedimentation, Plasma Fibrinogen and Leukocytosis as Indices of Rheumatic Infection," by A. C. Ernstene, M. D. *American Journal of Medical Science*, Vol. 180, p. 12, July, 1930.

"Orthopnea, its Relation to the Increased Venous Pressure of Myocardial Failure," by A. C. Ernstene, M. D., and H. L. Blumgart, M. D. *Archives of Internal Medicine*, Vol. 45, p. 593, April, 1930.

"The Significance of Sinus Arrhythmia in Old People," by James M. Faulkner, M. D. *American Journal of Medical Sciences*, July, 1930, Vol. CLXXX, p. 42.

"Stokes-Adams Syndrome in Rheumatic Fever: Report of a Case," by James M. Faulkner, M. D. *New England Journal of Medicine*, Vol. 202, p. 1252, June 26, 1930.

"The Serum Treatment of Lobar Pneumonia," by M. Finland, M. D. *New England Journal of Medicine*, 202:1244, June 26, 1930.

"A Clinical and Pathological Study of Chronic Myocarditis" by Greene FitzHugh, M. D. *New England Journal of Medicine*, Vol. 203, No. 5, pp. 201-208, July 31, 1930.

"Red Blood Cell Size in Anemia, its Value in Differential Diagnosis," by Greene FitzHugh, M. D. with W. P. Murphy, M. D. *Archives of Internal Medicine*, Vol. 46, pp. 440-457, September, 1930.

"The Synovial Fluid in Health and Disease with Special Reference to Arthritis," by C. E. Forkner, M. D. *Journal of Laboratory and Clinical Medicine*, 15:1178, September, 1930.

"Primary Carcinoma of the Lung," by Maurice Fremont-Smith, M. D., with J. Lerman, M. D., and P. D. Rosahn, M. D. *New England Journal of Medicine*, Vol. 203, No. 10, pp. 473-477, September 4, 1930.

"Forced Drainage of the Central Nervous System. Its Effect on the Blood and on the Cerebrospinal Fluid," by Frank Fremont-Smith, M. D., T. J. Putnam, M. D., and Stanley Cobb, M. D., with technical assistance of M. E. Dailey, A. B., M. A. Carroll, A. B., and C. Stephenson, A. B. *Archives of Neurology and Psychiatry*, Vol. 23, pp. 219-226, February, 1930.

"Metabolism and Treatment of Osteomalacia, its Relation to Rickets," by S. L. Gargill, M. D., D. R. Gilligan, M. D., and H. L. Blumgart, M. D. *Archives of Internal Medicine*, 45:879, June, 1930.

"Madura Foot Due to *Monosporium Apiospermum* in a Native American," by Douglas M. Gay, M. D., and James B. Bigelow, M. D. *American Journal of Pathology*, Vol. 6, p. 325, 1930.

"Experimental Combine System Disease," by Edwin F. Gildea, M. D., E. G. Kattwinkel and W. B. Castle, M. D. *New England Journal of Medicine*, 202:523, March 13, 1930.

"Studies of Diseases of the Lymphoid and Myeloid Tissues. 1. The Clinical Metabolism of Normal and Pathological Lymph Nodes," by Eugene C. Glover, M. D., with Henry Jackson, Jr., M. D., and Frederic Parker, Jr., M. D. *Journal of Experimental Medicine*, 52:547, October 1, 1930.

"The Metabolism of Normal and Leukemic Leukocytes," by Eugene C. Glover, M. D., with Geneva A. Daland, S. B., and Henry L. Schmitz, M. D. *Archives of Internal Medicine*, Vol. 46, pp. 46-66, July, 1930.

"Cholecystography," by Bernard I. Goldberg, M. D., in collaboration with S. A. Robbins, M. D. *New England Journal of Medicine*, July 13, 1929.

"Forceps, Version or Cæsarean Section?" by Frederick L. Good, M. D. *New England Journal of Medicine*, August 21, 1930.

Text of "Warren's Handbook of Anatomy," by Robert M. Green, M. D., published by Harvard University Press, October, 1930.

"Lattice Keratitis — Studies of Four Cases Observed in One Family," by Allen Greenwood, M. D., professional volume of the Academy of Ophthalmology and Oto-laryngology.

"The Life of the Reticulocytes: Experiments on their Maturation," by C. W. Heath, M. D., and G. A. Daland, *Archives of Internal Medicine*, 46:533, September, 1930.

"The Electric Charge of Mosaic Virus Particles," by Donald C. Hoffman, M. D., with Peter K. Olitsky, M. D. *Proceedings of the Society of Experimental Biology and Medicine*, 1930, XXVII, p. 378.

"The Mechanism of Enhancement of Infections by Testicle Extract," by Donald C. Hoffman, M. D., with F. Duran-Reynals, M. D. *Science*, 1930, LXXII, No. 1872, p. 508.

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- Allen, M. B. (See publication with Lennox, W. G.)  
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#### ADDRESSES OF THE STAFF.

Following is a list of addresses and lectures made by members of the Hospital Medical and Surgical Staff during the year 1930:

"Female Pelvic Roentgenography, Use of Opaque Media for Intra-Uterine Injections for Gynecological and Obstetrical Diagnosis," illustrated with lantern slides, address by Benedict F. Boland, M. D., before the Staff of the Harley Hospital, Dorchester, Mass., May 13, 1930.

"Fractures of the Carpal Scaphoid," address by Joseph H. Burnett, M. D., before the Belmont Medical Society, October 24, 1930.

"Requirement of a Department of Radiology in a Large Municipal Teaching Hospital," address by P. F. Butler, M. D., before the Congress on Medical Education, Medical Licensure and Hospitals, American Medical Association, Chicago, Ill., February 18, 1930.

"Roentgen Diagnosis of Tumors Outside the Gastro-Intestinal Tract," address by P. F. Butler, M. D., before the American Roentgen Ray Society, West Baden, Ind., September 20, 1930.

"Treatment of Anemia," address by William B. Castle, M. D., at the Faulkner Hospital, Boston, Mass., January 2, 1930.

"The Relation of Achylia Gastrica to the Causation of Pernicious Anemia," address by William B. Castle, M. D., before the Department of Physiology, Boston University, Boston, Mass., January 10, 1930.

"Some Aspects of the Treatment of Anemia," address by William B. Castle, M. D. (with George R. Minot, M. D., as co-author), before the Tri-States Medical Association of Mississippi, Arkansas, Tennessee; Memphis, Tenn., January 15, 1930.

"The Relationship of Gastrointestinal Pathology to Anemia," address by William B. Castle, M. D., before the Roxbury Clinical Record Club, Boston, Mass., February 11, 1930.

"The Relationship of Achylia Gastrica to the Causation of Pernicious Anemia," address by William B. Castle, M. D., before the Providence Medical Association, Providence, R. I., March 3, 1930.

"Observations on the Hematopoietic Functions of the Normal Human Stomach," address by William B. Castle, M. D., before the Physiological Conference, Boston University, April 2, 1930.

"Fundamental Principles of Adequate Nutrition," address by William B. Castle, M. D., before the Rhode Island Dietetics Association, Providence, R. I., April 10, 1930.

"Dietetic Anemia and Allied Conditions," address by William B. Castle, M. D., before the New England Health Institute, Boston, Mass., April 15, 1930.

"Further Observations on the Etiological Relationship of Achylia Gastrica to Pernicious Anemia," address by William B. Castle, M. D., with W. C. Townsend, M. D., and C. W. Heath, M. D., before the American Society for Clinical Investigation, Atlantic City, N. J., May 5, 1930.

"Presentation of the Gold Medal of the National Institute of Social Sciences to Dr. George R. Minot," address by William B. Castle, M. D., at the National Institute of Social Sciences, New York City, May 8, 1930.

"Etiology of Pernicious Anemia," address by William B. Castle, M. D., before the American Academy of Arts and Sciences, Boston, Mass., May 14, 1930.

"The Relationship of Gastrointestinal Pathology to Anemia," address by William B. Castle, M. D., before the Medical Society of New York, Rochester, N. Y., June 3, 1930.

"The Anemias of Achlorhydria," address by William B. Castle, M. D., at the Physicians Hospital of Plattsburg, New York, July 30, 1930.

"The Relationship of Diseases of the Digestive Tract to Anemia," address by William B. Castle, M. D., before the Interstate Post Graduate Clinic of North America, Minneapolis, Minn., October 22, 1930.

"The Etiology of Pernicious Anemia," address by William B. Castle, M. D., before the School of Medicine, University of Wisconsin, Madison, Wis., October 25, 1930.

"The Nature and Treatment of Anemias," address by William B. Castle, M. D., before the Post Graduate Clinic, Central Maine General Hospital, Lewiston, Me., November 14, 1930.

"The Etiology of Pernicious Anemia," address by William B. Castle, M. D., before the Academy of Medicine, Richmond, Va., November 25, 1930.

"Deficiency Diseases in Relation to Anemias," address by William B. Castle, M. D., before the School of Medicine and Hospital, Duke University, Durham, N. C., November 27, 1930.

"The Etiology of Pernicious Anemia," address by William B. Castle, M. D., at the Staff Meeting, Rockefeller Institute, New York City, December 5, 1930.

"The Coexistence of Myxedema and Pernicious Anemia," address by William B. Castle, M. D. (with J. H. Means, M. D., and J. Lerman, M. D., as co-authors), before the Association of American Physicians, Atlantic City, N. J., May 7, 1930.

"Surgery of the Pericardium," address by Edward D. Churchill, M. D., before the Wisconsin Clinical Surgical Club, Boston City Hospital, February 5, 1930.

"Chest Surgery," address by Edward D. Churchill, M. D., before the Springfield Academy of Medicine, Springfield, Mass., March 27, 1930.

"Chest Surgery," address by Edward D. Churchill, M. D., before the House of Mercy Hospital, Pittsfield, Mass., April 2, 1930.

"Surgery of the Pericardium," address by Edward D. Churchill, M. D., before the American Physicians, Atlantic City, N. J., May 6, 1930.

"Decortication of the Heart for Adhesive Pericarditis," address by Edward D. Churchill, M. D., before the Presbyterian Medical Center, June 6, 1930.

"Histopathology of Different Types of Electric Shock on Mammalian Brains," paper read by Stanley Cobb, M. D., before the American Neurological Association, June, 1930.

"Thyroid Diseases," address by Robert C. Cochrane, M. D., before the Malden Training School, February 27, 1930.

"The Nature of the Material Effective in Pernicious Anemia," address by E. J. Cohn, M. D. (with T. L. McMeekin, M. D., and G. R. Minot, M. D., as coauthors), before the American Society of Biological Chemistry, Chicago, Ill., April, 1930; and before the Association of American Physicians, Atlantic City, N. J., May 6, 1930.

"Jaundice, as a Symptom," paper read by Louis F. Curran, M. D., before the South Boston Medical Society, November, 1930.

"Fracture Treatment — Report Fracture Committee," address by Frederic J. Cotton, M. D., before the American College of Surgeons, Worcester, Mass., January 6, 1930.

"Report on Fractures," address by Frederic J. Cotton, M. D., before the American College, National Fracture Committee, New York, N. Y., January 10, 1930.

"Medical Jurisprudence," address by Frederic J. Cotton, M. D., at Tufts College, January 15, 1930.

"Clinic at the Boston City Hospital," address by Frederic J. Cotton, M. D., before the Wisconsin Clinical Surgical Society, February 5, 1930.

"Osteitis and the Borderline Tumors," address by Frederic J. Cotton, M. D., before the Arlington Doctor's Club, Arlington, Mass., February 11, 1930.

"Borderline Tumors," address by Frederic J. Cotton, M. D., before the New England Roentgen Ray Society, Boston, Mass., February 21, 1930.

"Physiotherapy," address by Frederic J. Cotton, M. D., before the Posse Institute, Boston, Mass., March 19, 1930.

"Non Union of Fractures — Technique of Graft Operations," address by Frederic J. Cotton, M. D., before the Northern Tri-State Medical Society, Fort Wayne, Indiana, April 8, 1930.

"Clinic at the Boston City Hospital," address by Frederic J. Cotton, M. D., before the Buffalo Surgical Society, April 11, 1930.

"Osteomyelitis," address by Frederic J. Cotton, M. D., before the Rutland County Medical and Surgical Society at Rutland, Vt., April 15, 1930.

"Treatment of Injuries in Hospitals," address by Frederic J. Cotton, M. D., before the New Hampshire State Medical Society, Concord, N. H., May 13, 1930.

"Boston City Hospital Clinical Demonstration," address by Frederic J. Cotton, M. D., before the American Orthopedic Association, June 18, 1930.

"Bone Grafting — Cancer," address by Frederic J. Cotton, M. D., before the Springfield Medical Association, Springfield, Mass., September 9, 1930.

"Osteitis Fibrosa — Relation of Fractures and Injuries to Bone Tumors," address by Frederic J. Cotton, M. D., before the Bloodgood Clinic, Baltimore, Md., September 17, 1930.

"Notes on Tumors and Near Tumors of Bone," address by Frederic J. Cotton, M. D., before the Annual Meeting of the New England Surgical Society, Boston, Mass., September 26, 1930.

"Physiotherapy of Fresh Fractures," address by Frederic J. Cotton, M. D., before the American Academy of Physical Therapy, Boston, Mass., October 22, 1930.

"The Crippled Child," radio talk by Frederic J. Cotton, M. D., at the American College of Surgeons, Philadelphia, Pa., October 15, 1930.

"Compound Injuries," address by Frederic J. Cotton, M. D., at a meeting of the American College of Surgeons, Philadelphia, Pa., October 15, 1930.

"Volkmann's Paralysis," discussion by Frederic J. Cotton, M. D., before the Faulkner Hospital Staff, Jamaica Plain, Mass., December 4, 1930.

"Treatment of Compound Fractures," address by Frederic J. Cotton, M. D., before the Boston Orthopedic Club, Boston, Mass., December 8, 1930.

"Treatment of Idiopathic Purpura Hemorrhagies with Special Reference to the Control of Uterine and Other Hemorrhagies, in these Cases," address by G. W. Dickinson, M. D., before the American Academy of Physiotherapy, November 14, 1930.

"Therapeutic Application of Galvanism in Some Important Pathological Conditions," address by G. W. Dickinson, M. D., before the New England Physical Therapy Society, December 17, 1930.

"Pneumonia," paper submitted by G. W. Dickinson, M. D., to the American College of Physicians, August, 1930.

"The Opportunities of the Municipal Hospital," address by John J. Dowling, M. D., before the New England Health Institute, Boston, Mass., April 17, 1930.

"Principals of Dermatology," lectures by John G. Downing, M. D., before the nurses at St. Elizabeth's Hospital, January, 1930; before the nurses at The Chelsea Memorial Hospital, February, 1930; and before the nurses at St. Margaret's Hospital, April, 1930.

"Surgical Measures in the Treatment of Lung Tuberculosis," address by Albert Ehrenfried, M. D., before the staff meeting of the Sanatorium Division of The Boston City Hospital, October 29, 1930.

"The Rational Treatment of Arterial Hypertension," address by Laurence B. Ellis, M. D., with Soma Weiss, M. D., before the Section on Pharmacology and Therapeutics at the Eighty-first Annual Session of the American Medical Association, Detroit, Mich., June 25, 1930.

"The Circulatory Mechanism and Unilateral Edema in Cerebral Hemiplegia," address by Laurence B. Ellis, M. D., with Soma Weiss, M. D., as coauthor, before the American Society for Clinical Investigation, Atlantic City, N. J., May 5, 1930.

"Serum Pigmentation Studies," including (a) "General survey of incidence of latent jaundice, (b) Technic, correlation and interpretation of the icterus Index, van den Bergh reaction and quantitative bilirubin, (c) Traumatic and Post-operative Icterus (latent) Post-operative Liver function, (d) Kinetics of the Latent Jaundice of lobar pneumonia in the white and black races," by Norman W. Elton, M. D., Scientific Exhibit, Eighty-first Annual Session, American Medical Association, Booth 703, Detroit, Mich., June 3, 1930.

"The Management of the Cardiac Patient in Surgical Operations," address by James M. Faulkner, M. D., before the New Bedford Medical Society, February 10, 1930.

"Report of a Case of Stokes-Adams Syndrome in Rheumatic Fever," address by James M. Faulkner, M. D., before the New England Heart Association at the Good Samaritan Hospital, Boston, Mass., May 15, 1930.

"Nerves and Nervous Diseases," by Maurice Fremont-Smith, M. D., lecture under auspices of Harvard Medical School, January 26, 1930.

"Neurology in General Medicine," lecture by Maurice Fremont-Smith, M. D., before the Springfield Academy of Medicine, March 21, 1930.

"The Problem of Neurosis," lecture by Maurice Fremont-Smith, M. D., before the Union Maternal Association, Roxbury, Mass., May 8, 1930.

"The Problem of Neurosis," lecture by Maurice Fremont-Smith, M. D., before the Wakefield Mothers' Club, September 8, 1930; before the Mothers' and Teachers' Guild, Harvard Church, Brookline, Mass., November 6, 1930; and before the Forest Hills Hospital, Jamaica Plain, Mass., December 18, 1930.

"Forceps, Version or Cæsarean Section?" by Frederick L. Good, M. D., paper read before the Massachusetts Medical Society at Plymouth, Mass., June, 1930.

"Lattice Keratitis — Studies of Four Cases in One Family," by Allen Greenwood, M. D., paper read before the American Academy of Ophthalmology and Oto-Laryngology, Chicago, Ill., October 27, 1930.

"Heart Defects in Relation to Pregnancy," by Burton E. Hamilton, M. D., public lecture, Harvard Medical School, Boston, Mass., February 23, 1930.

"Thyroid Heart," address by Burton E. Hamilton, M. D., combined meeting of Manchester Medical Association and New England Heart Association, at Manchester, N. H., March 11, 1930.

"The Heart — Its Function and Disorders," address by Burton E. Hamilton, M. D., before the Young Men's Christian Association, March 17, 1930.

"Heart Disease in Relation to Pregnancy," address by Burton E. Hamilton, M. D., before the Norfolk District Medical Society, Boston, Mass., March 24, 1930.

"Clinical Aspects of Certain Rare Cardiac Disorders," address by Burton E. Hamilton, M. D., before the Brockton Medical Society, Brockton, Mass., April 10, 1930.

"Heart Disease Complicating Pregnancy," address by Burton E. Hamilton, M. D., before the New England Health Institute, Boston City Hospital, April 15, 1930.

"Prenatal Care of Cardiacs," address by Burton E. Hamilton, M. D., before the New England Health Institute, Boston Lying-in-Hospital, April 16, 1930.

"Thyroid Hearts," address by Burton E. Hamilton, M. D., before the Bristol North District Medical Society at Taunton, Mass., April 17, 1930.

"Some Clinical Aspects of Rare Heart Disorders," address by Burton E. Hamilton, M. D., before the Worcester Practitioners' Club, Worcester, Mass., April 22, 1930.

"The Heart — Its Function and Disorders," address by

Burton E. Hamilton, M. D., before the Boston School of Occupational Therapy, Boston, Mass., June 6, 1930.

"Clinical Aspects of Heart Failure," address by Burton E. Hamilton, M. D., before the Tully Medical Society at Athol, Mass., October 21, 1930.

"Observations on Reticulocytes," address by Clark W. Heath, M. D., before the Boston Society of Biologists, Boston, Mass., December 3, 1930.

"Further Observations on the Etiological Relationship of Achylia Gastrica to Pernicious Anemia," address by Clark W. Heath, M. D. (with W. B. Castle, M. D., and W. C. Townsend, M. D., as co-authors), at the American Society for Clinical Investigation, Atlantic City, N. J., May 5, 1930.

"Acute and Chronic Inflammations of the Prostate, The Obstructing Prostate — Their Methods of Diagnosis and Treatment," address by Herbert H. Howard, M. D., at the Norwood Hospital, April 10, 1930.

"What the General Practitioner Should Know about Urology," address by Herbert H. Howard, M. D., at the Framingham Union Hospital, November 4, 1930.

"Urology in Its Relation to Dentistry," address by Herbert H. Howard, M. D., before the Boston City Hospital Oral Surgery Department at the Copley Square Hotel, December 10, 1930.

"Diverticulitis of the Bladder," address by Herbert H. Howard, M. D., before the American Urological Association, June, 1930.

"The Diagnosis and Treatment of Malignant Lymphoma," address by Henry Jackson, Jr., M. D., before the Associated Roentgen Societies, January 24, 1930.

"Cancer," lecture by Henry Jackson, Jr., M. D., before the Committee of Public Lectures, Harvard Medical School, March 23, 1930.

"Biological Aspects of Cancer," address by Henry Jackson, Jr., M. D., before the Massachusetts General Hospital Staff Meeting, November 13, 1930.

"Treatment of Hodgkin's Disease," address by Henry Jackson, Jr., M. D., before the Academy of Physiotherapy, November 14, 1930.

"Diseases Associated with Grossly Abnormal Blood Cell Pictures," address by Henry Jackson, Jr., M. D., before the C. P. Huntington Memorial Hospital Staff Meeting, November 19, 1930.

"The Anemia of Cancer," address by Henry Jackson, Jr., M. D., before the Pondville Hospital Staff Meeting, December 4, 1930.

"Diabetes," address by Elliott P. Joslin, M. D., before the American College of Physicians, Minneapolis, Minn., February 12, 1930.

"Diabetes," address by Elliott P. Joslin, M. D., before the Wisconsin Surgical Club, Milwaukee County Medical Society, February 14, 1930.

"Diabetic Children," address by Elliott P. Joslin, M. D., at the Fifth Avenue Hospital, New York City, February 26, 1930.

"The End Results of Patients Undergoing Treatment between 1898 and 1929," address by Elliott P. Joslin, M. D., before the New York Academy of Medicine, March 18, 1930.

"Wandering Diabetic Nurses," address by Elliott P. Joslin, M. D., before the New England Health Institute, April 18, 1930.

"Diabetes, Its Treatment and Prevention," address by Elliott P. Joslin, M. D., Public Health Radio Talk over WBZA, May 1, 1930.

"Diabetes in Medicine and Surgery," address by Elliott P. Joslin, M. D., before the Columbus Society of Internal Medicine, Columbus, Ohio, May 3, 1930.

"Diabetes, Its Treatment and Prevention," address by Elliott P. Joslin, M. D., before the Gorgas Memorial Institute, May 9, 1930.

"End Results of Diabetic Patients Undergoing Treatment between 1898 and 1929," address by Elliott P. Joslin, M. D., before the Yale Medical Alumni, New Haven, Conn., June 16, 1930.

"Diabetes," address by Elliott P. Joslin, M. D., before the Montour County Medical Society, Danville, Pa., June 20, 1930, before the Diabetic Camp for Children, Cleveland, Ohio, August 3, 1930, and before the New York Medical Association, October 7, 1930.

"Unclassified Glycosurias — Their Significance and Outcome," address by Elliott P. Joslin, M. D., before the Interstate Post Graduate Medical Assembly, Minneapolis, Minn., October 24, 1930.

"The Carbohydrates in the Body," address by Elliott P. Joslin, M. D., before the William Harvey Society, Beth Israel Hospital, Boston, Mass., December 12, 1930.

"Plastic Surgery of the Nose and Face," lecture by V. H. Kazanjian, D. M. D., M. D., before the Eye, Ear, Nose and Throat Club, Worcester, Mass., January 15, 1930.

"Treatment of Face and Jaw Injuries, Military and Civilian," lecture by V. H. Kazanjian, D. M. D., M. D., before the Newport Medical Society, United States Naval Hospital, Newport, R. I., February 13, 1930.

"Prosthetic Restoration Following Deformities of Face and Jaws," lecture by V. H. Kazanjian, D. M. D., M. D., before the Portland Dental Society, Portland, Me., March 12, 1930.

"Treatment of Acute Infections of the Mouth," lecture by V. H. Kazanjian, D. M. D., M. D., before the Metropolitan District Dental Society, Boston, Mass., April 16, 1930.

"Treatment of Acute Infections of the Mouth," lecture by V. H. Kazanjian, D. M. D., M. D., before the Virginia State Dental Association, Richmond, Va., May 12, 1930.

"Osteomyelitis of the Jaw," lecture by V. H. Kazanjian, D. M. D., M. D., before the Vermont Dental Society, Burlington, Vt., May 21, 1930.

"Reconstructive Surgery, with Especial References to Facial Deformities," lecture by V. H. Kazanjian, D. M. D., M. D., before the Springfield Academy of Medicine, Springfield, Mass., November 11, 1930.

"Treatment of Deformities of the Face and Jaw," lecture by V. H. Kazanjian, D. M. D., M. D., before the Table Clinic, Greater New York Dental Society, New York City, N. Y., December 2, 3 and 4, 1930.

"The Treatment of Anemia," address by Chester S. Keefer, M. D., before the United States Naval Hospital, Newport, R. I., November 20, 1930.

"Sepsis," address by Arthur R. Kimpton, M. D., before the Newton Medical Society, Newton Hospital, Newton, Mass., April, 1930.

"Cancer of Breast," address by Arthur R. Kimpton, M. D., before the Staff Meeting, Massachusetts Memorial Hospital, May, 1930.

"Acute Empyema," address by Edwin A. Locke, M. D., before the American Climatological and Clinical Association, Quebec, Can., May 13, 1930.

"Fifty Years of the American Surgical Association," presidential address by Fred B. Lund, M. D., before the American Surgical Society, May 15, 1930.

"Bilateral Femoral Embolectomy," case report by Charles C. Lund, M. D., before the New England Surgical Society, September 27, 1930.

"The Fischer-Wasel Treatment of Cancer with Carbon Dioxide and Oxygen," address by Charles C. Lund, M. D., before the Staff Meeting, Massachusetts General Hospital, November 13, 1930.

"Weight and the Prognosis of Cancer," address by Charles C. Lund, M. D., before the Staff Meeting, Huntington Memorial Hospital, December 12, 1930.

"So-Called Chronic Appendicitis," radio talk by Charles C. Lund, M. D., over Station WBZA, under the auspices of the Massachusetts Department of Health, December 10, 1930.

"Obstetrical and Gynecological subjects," addresses by Frederick J. Lynch, M. D., before the Hampden District Medical Society, October 22, 1929; before the Norfolk South District Medical Society, December 5, 1929; before the Worcester District Medical Society, January 2, 1930; before the Essex North District Medical Society, January 8, 1930; before the Plymouth District Medical Society, January 16, 1930; before the Northampton Medical Society, February 12, 1930;

before the Malden Medical Society, February 18, 1930; before the Essex South District Medical Society, March 5, 1930; before the Webster Medical Club, April 16, 1930; and before the Norwood Medical Society, November 13, 1930.

"Oral Diagnosis, Its Importance in Constitutional Diseases," address by Francis P. McCarthy, M. D., before the Norfolk South Medical Society, February 6, 1930.

"Oral Diagnosis," address by Francis P. McCarthy, M. D., before the Hartford Dental Society, Hartford, Conn., February 10, 1930.

"Mouth Lesions," address by Francis P. McCarthy, M. D., before the Attleboro Medical and Dental Society, March 11, 1930.

"The Oral Manifestations of Various Dermatoses," address by Francis P. McCarthy, M. D., before the Forsyth Dental Internes, March 14, 1930.

"Serological Tests in the Diagnosis of Syphilis," address by Francis P. McCarthy, M. D., before the Forsyth Dental Internes, March 28, 1930.

"Clinics with Lectures, Diseases of the Oral Cavity," address by Francis P. McCarthy, M. D., before the Rhode Island Dental Society, Providence, R. I., March 24, 31 and April 7, 1930.

"Focal Infection in the Mouth," address by Francis P. McCarthy, M. D., before the New England Public Health Institute, April 15, 1930.

"Oral Diagnosis," address by Francis P. McCarthy, M. D., before the Brockton Dental Society, May 1, 1930.

"Diagnosis, Pathology and Treatment of Diseases of the Mouth," address by Francis P. McCarthy, M. D., before the Maine Dental Society, June 20, 1930.

"The Diagnosis and Treatment of Oral Diseases," address by Francis P. McCarthy, M. D., before the Chelsea and Revere Medical and Dental Society, May 21, 1930.

"Oral Manifestations of Various Dermatoses and Constitutional Disease," address by Francis P. McCarthy, M. D., before the Italian Medical Society, June 9, 1930.

"Diagnosis and Treatment of Oral Diseases," address by Francis P. McCarthy, M. D., before the Valley District Dental Society, Greenfield, Mass., October 6, 1930.

"Diagnosis and Treatment of Mouth Lesions," address by Francis P. McCarthy, M. D., before the Essex Dental Society, Salem, Mass., November 6, 1930.

"Pathology of Process of Repair with Clinical Applications," address by Francis P. McCarthy, M. D., before the Boston City Hospital Physiotherapy Technicians, December 8, 1930.

"Focal Infection, a Review of Twenty Years," address by Francis P. McCarthy, M. D., before the St. Elizabeth's Hospital Staff, December 11, 1930.

"Electrosurgery of Accessible Growths," paper read by

William D. McFee, M. D., at the Convention of the New England Physical Therapy Society and American Physical Therapy Association, Boston, Mass., April 7, 1930.

"Physical Therapy in Orthopedic Conditions," paper of Dr. Harold D. Corbusier, discussed by William D. McFee, M. D., before the Section of Physical Therapy, Massachusetts Medical Society, Plymouth, Mass., June, 1930.

"Physical Therapy," lecture by William D. McFee, M. D., to post-graduate students at Boston City Hospital, August, 1930.

"The Scope of Physical Therapy," president's address by William D. McFee, M. D., at the Annual Convention of the American Academy of Physical Therapy, Boston, Mass., November 12, 1930.

"Modern Treatment of Accessible Growths," paper read by William D. McFee, M. D., at the Fifth International Congress of Physiotherapy at Liege, Belgium, September 16, 1930.

"Caesarian Section," address by Reginald D. Margeson, M. D., including moving pictures of "Transverse Caesarian Section," before the Malden Hospital, November 2, 1930; before the Hart Hospital, November 16, 1930; before the Chelsea Memorial Hospital, November 12, 1930.

"Toxemia of Pregnancy," address by Reginald D. Margeson, M. D., including moving pictures of "Transverse Caesarian Section," before the East Boston Medical Society, November 30, 1930; before the South Boston Medical Society, December 8, 1930; and at the Massachusetts Women's Hospital, December 9, 1930.

"Modern Advances in Obstetrics," address by G. Elliott May, M. D., before the Framingham Medical Club, at the University Club, Boston, Mass., October 8, 1930.

"The Treatment of Anemia," address by George R. Minot, M. D., before the South End Neighborhood Club, Boston, Mass., January 21, 1930.

"Treatment of Anemia," address by George R. Minot, M. D., before the Massachusetts Memorial Hospital, Boston, Mass., January 31, 1930; before the Wisconsin Clinical Surgical Club, Boston, Mass., February 5, 1930; before the Buffalo Surgical Society, Boston, Mass., April 11, 1930; before the Boston City Hospital Alumni, Boston, Mass., April 28, 1930; and before the Springfield Academy of Medicine, Springfield, Mass., October 14, 1930.

"Dietetic Anemia and Allied Conditions," address by George R. Minot, M. D., before the New England Health Institute, Boston, Mass., April 17, 1930.

Acknowledgment of award of gold medal to Doctor Minot and address: "The Treatment of Pernicious Anemia and the Importance of Food in Relation to Chronic Disease," before the National Institute of Social Sciences, New York City, May 6, 1930.

"The Sequence of Events which led to the Discovery of Liver Therapy in Pernicious Anemia," address by George R. Minot, M. D., before the Harvard Chapter of the Phi Beta Kappa Society, Cambridge, Mass., June 16, 1930.

"The Practical Importance of the Analysis of the Stool, Especially in Microscopic Appearance," address by George R. Minot, M. D., before the Hancock County Medical Society, Bar Harbor, Me., August 15, 1930.

"Development of the Harvard Medical School in the Past Twenty Years," address by George R. Minot, M. D., before the Class of 1908, Harvard University Dinner, Boston, Mass., November 14, 1930.

Acknowledgment of "The Popular Science Monthly Annual Award for the Advancement in Science of Greatest Value to the Public," awarded jointly to Dr. George R. Minot, and Dr. George H. Whipple of the University of Rochester, New York City, December 18, 1930.

"General Indications of X-Ray Therapy," address by Albert M. Moloney, M. D., delivered before the South Boston Medical Society, January 10, 1930.

"The Management of Gastric and Duodenal Ulcers, Including Perforated Ulcers and Hemorrhagic Ulcers," paper read by William R. Morrison, M. D., before the Framingham Medical Society, February 3, 1930.

"Herniae and Intestinal Obstruction," paper read by William R. Morrison, M. D., before the Nursing Staff of the Massachusetts Women's Hospital, May 12, 1930.

"Lymphatic Leukemia," a case report by Gulli Lindh Muller, M. D., before the Staff Meeting, New England Hospital for Women and Children, Boston, Mass., September 18, 1930.

"Treatment of Secondary Anemia," address by Gulli Lindh Muller, M. D., before the Staff Meeting of the New England Hospital for Women and Children, Boston, Mass., October 16, 1930.

"The Leucocyte Reaction in Tuberculosis in Infancy and Childhood," address by Gulli Lindh Muller, M. D., before the Staff Meeting at the New England Hospital for Women and Children, Boston, Mass., December 18, 1930.

"Symptomatology and Immediate Treatment of Cranial and Intracranial Injury in the New-Born, including Intracranial Hemorrhage," paper read by Donald Munro, M. D., before the Section of Pediatrics at the Annual Meeting of the Massachusetts Medical Society, June 18, 1930.

"Osteomyelitis of the Flat Bones of the Head," address by Donald Munro, M. D., before the Southern Surgical Society, December 9, 1930.

"Psychology of Reward and Punishment," address by Abraham Myerson, M. D., before the Boston University of Education, Boston, Mass., January 6, 1930.

"Problems of the Adult," address by Abraham Myerson,

M. D., before the New York Mental Hygiene Clinic, Brooklyn, N. Y., January 7, 1930, and January 14, 1930.

"Inheritance and Environment," address by Abraham Myerson, M. D., before the Bridgeport, Conn., Mental Hygiene Society, January 20, 1930.

"The Inheritance of Mental Diseases," address by Abraham Myerson, M. D., before the Phillips Brooks Association, Harvard Medical School, Boston, Mass., April 28, 1930.

"The Pathological and Biological Basis of Mental Deficiency," address by Abraham Myerson, M. D., before the American Association for the Study of Feeble-mindedness, First International Congress on Mental Hygiene, Washington, D. C., May 6, 1930.

"Studies of the Biochemistry of Brain Blood by the Internal Jugular Puncture Method," address by Abraham Myerson, M. D., before the American Psychiatric Association, First International Congress on Mental Hygiene, Washington, D. C., May 7, 1930.

"Intracranial Pathology Lesions, Diagnosis and Treatment," address by Abraham Myerson, M. D., at the Symposium, New Hampshire Medical Society, Concord, N. H., May 14, 1930.

"That Tired Feeling," address by Abraham Myerson, M. D., before the New Hampshire Federation of Women's Clubs, Keene, N. H., May 20, 1930.

"Body and Mind," address by Abraham Myerson, M. D., before the Worcester Mental Hygiene Society, Worcester, Mass., June 3, 1930.

"Neurasthenia," address by Abraham Myerson, M. D., before the Boston School of Occupational Therapy, Boston, June 9, 1930.

"Newer Phases of Heredity and Environment and Their Relationship to the Child," address by Abraham Myerson, M. D., before the Unitarian Layman's League, Star Island, N. H., July 14, 1930.

"The Emotional Life of the Child," address by Abraham Myerson, M. D., before the Unitarian Layman's League, Star Island, N. H., July 14, 1930.

"Inheritability of Mental Diseases," address by Abraham Myerson, M. D., at Smith College, Northampton, Mass., August 1, 1930.

"That Tired Feeling," address by Abraham Myerson, M. D., before the Hatherly Medical Club, Plymouth, Mass., September 10, 1930.

"The Newer Clinical Aspects of Spinal Fluid Work," address by Abraham Myerson, M. D., before the Fall River Medical Society, Fall River, Mass., October 8, 1930.

"The Conflict Between the Immigrant and the American Born Child," address by Abraham Myerson, M. D., before the Maine State Conference of Social Welfare, Augusta, Me., October 16, 1930.

"The Present Clinical Significance of Spinal Fluid Findings," address by Abraham Myerson, M. D., before the Boston Tuberculosis Association, Boston, Mass., October 21, 1930.

"Fatigue," address by Abraham Myerson, M. D., before the Young Men's Hebrew Association Forum, Boston, Mass. January 26, 1930.

"Inheritance and Environment," address by Abraham Myerson, M. D., before the Community Forum, Watertown, Mass., February 2, 1930; and before the Women's Club, at Hingham, Mass., February 18, 1930.

"The Physiological Approach to the Psychoses," address by Abraham Myerson, M. D., before the Massachusetts Psychiatric Society, Boston, Mass., February 7, 1930.

"Normal and Abnormal Fear," address by Abraham Myerson, M. D., before the University State Extension Group, Boston, Mass., February 12, 1930.

"Adaptation and Fatigue," address by Abraham Myerson, M. D., at Smith College, Northampton, Mass., February 25, 1930.

"Biochemistry of Brain Activity," address by Abraham Myerson, M. D., before the Greater Boston Medical Society, March 4, 1930.

"Hereditary and Environmental Factors in the Emotional Life of the Child," address by Abraham Myerson, M. D., before the Chicago Association for Child Study and Parent Education, Chicago, Ill., March 6, 1930; also before the Youth Conference, Hotel Statler, Boston, Mass., March 13, 1930.

"The Physiological Approach to the Psychoses," address by Abraham Myerson, M. D., before the Boston Society of Psychiatry and Neurology, March 20, 1930.

"The Nerve Element in Fatigue," address by Abraham Myerson, M. D., before the Kosmos Club, Wakefield, Mass., March 21, 1930.

"Fear and Nervous Energy," address by Abraham Myerson, M. D., before the University Extension Group, Boston, Mass., April 7, 1930.

"Mental Health," address by Abraham Myerson, M. D., before the Headmasters' Association, Boston, Mass., April 9, 1930.

"Psychiatry in Private Practice," address by Abraham Myerson, M. D., before the Worcester State Hospital, Worcester, Mass., April 11, 1930.

"Cerebrospinal Fluid; Its Significance," address by Abraham Myerson, M. D., before the United States Naval Hospital, Chelsea, Mass., April 14, 1930.

"That Tired Feeling," address by Abraham Myerson, M. D., before the Beth Israel Hospital Auxiliary, Boston, Mass., April 17, 1930.

"Inheritance and Environment," address by Abraham Myerson, M. D., at the Psychopathic Hospital, Boston, Mass., April 18, 1930.

"Are We Individuals," address by Abraham Myerson, M. D., before the Pepperell Manufacturing Company, New York City, April 24, 1930.

"Mental Health," address by Abraham Myerson, M. D., before the Manchester Institute of Arts and Sciences, Manchester, N. H., October 24, 1930.

"Our Children," address by Abraham Myerson, M. D., before the Massachusetts State Home Economics Association, Greenfield, Mass., October 25, 1930.

"The Illusion of Individuality," address by Abraham Myerson, M. D., before the Boston Ethical Society, Boston, October 26, 1930; also before the Menssana Club, Reading, Mass., November 10, 1930.

"What Shall We Do With Our Emotions?" address by Abraham Myerson, M. D., before the Manchester Institute of Arts and Sciences, Manchester, N. H., November 14, 1930.

"Adult Adjustment," address by Abraham Myerson, M. D., before the Adeth Israel Sisterhood, Louisville, Ky., November 20, 1930.

"The Nervous Housewife," address by Abraham Myerson, M. D., before the Woman's Club, Springfield, Ill., November 22, 1930.

"Prevention of Mental and Nervous Diseases in our Modern Civilization," address by Abraham Myerson, M. D., before the Chicago Forum, Chicago, Ill., November 23, 1930.

"Our Fears — Normal and Abnormal," address by Abraham Myerson, M. D., before the Emil Hirsch Lecture Association, Chicago, Ill., November 24, 1930.

"Inheritance and Environment: Its Effect on Personality," address by Abraham Myerson, M. D., before the Illinois Society of Mental Hygiene, Chicago, Ill., November 25, 1930.

"Inheritance and Environment in Relationship to Personality," address by Abraham Myerson, M. D., before the Unitarian's League, Boston, Mass., December 8, 1930.

"Psychoanalysis," address by Abraham Myerson, M. D., before the Middlesex Medical Club, Boston, Mass., December 9, 1930.

"Mental Hygiene," address by Abraham Myerson, M. D., before the Massachusetts Schoolmasters' Club, Boston, Mass., December 13, 1930.

"Irradiation of Primary Cancer of the Breast," address by Frederick W. O'Brien, M. D., before the New England Roentgen Ray Society, Boston City Hospital, January 24, 1930.

"Kummell's Disease," address by Frederick W. O'Brien, M. D., before the New England Roentgen Ray Society, Van-

derbilt Hall, Harvard Medical School, April 18, 1930; before the Radiological Conference of the Yale University Medical School, New Haven, Conn., May 7, 1930; also before the Hartford State Medical Society Annual Meeting, Hartford, Conn., May 21, 1930.

"Hodgkin's Disease," address by Frederick W. O'Brien, M. D., before the American Academy of Physical Therapy, Copley Plaza Hotel, Boston, Mass., November 21, 1930.

"Lymphoblastoma" (Hodgkin type), address by Frederick W. O'Brien, M. D., before the North American Radiological Society, Los Angeles, Cal., December 5, 1930.

"Unrecognized Fracture *vs.* Kummell's Disease," address by Frederick W. O'Brien, M. D., before the North American Radiological Society, Los Angeles, Cal., December 5, 1930.

"Lung Abscess," address by Thomas J. O'Brien, M. D., at the Clinical Meeting, Boston City Hospital, January 25, 1930.

"Proposed Legislation Affecting the Practice of Medicine," address by Thomas J. O'Brien, M. D., at the Commercial Club, Brockton, Mass., January 29, 1930.

"Nostrums and Quackery," address by Thomas J. O'Brien, M. D., before the Rotary Club, Somerville, Mass., April 1, 1930.

"Heart Block," address by Thomas J. O'Brien, M. D., before the New England Health Institute, April 15, 1930.

"Medical Legislation," address by Thomas J. O'Brien, M. D., before the Worcester North District Medical Society at Fitchburg, Mass., July 22, 1930.

"Some Children's Diseases," talk by Dwight O'Hara, M. D., before the Waltham Mothers' Club, January 3, 1930.

"Dr. Charles Dickens," paper read by Dwight O'Hara, M. D., before the Newton Medical Club, October 13, 1930.

"What the General Practitioner Should Know about Genito-Urinary Symptoms," talk by William R. Ohler, M. D., before the Symmes Arlington Hospital, January 14, 1930.

"Diabetes and its Complications," address by William R. Ohler, M. D., before the Forest Hills Hospital, January 15, 1930.

"Nephritis," address by William R. Ohler, M. D., before the Hatherly Medical Club, March 12, 1930; also at Peterboro, N. H., April 16, 1930; and before the Worcester State Hospital, October 3, 1930.

"The Clinical Application of Certain Laboratory Procedures," address by William R. Ohler, M. D., before the Dorchester Medical Club, April 10, 1930.

"An Evaluation of Therapeutic Results in Essential Hypertension," discussion by William R. Ohler, M. D., before the Boston Dispensary, May 22, 1930, of a paper written by Dr. Ayman.

"Clinical Papers on Nephritis, Diabetes and Basal Metabolism Studies," address by William R. Ohler, M. D., at Rutland, Mass., July 8, 1930.

"The Clinical Application of Basal Metabolism Studies," address by William R. Ohler, M. D., at Wakefield, Mass., September 24, 1930.

"The Clinical Application of Certain Laboratory Procedures," talk by William R. Ohler, M. D., at Springfield, Mass., October 30, 1930; also before the Malden Medical Society, November 18, 1930.

"Nephritis," radio talk by William R. Ohler, M. D., at Hotel Statler, December 3, 1930.

"Fundamentals of Therapeutics," address by Francis W. Palfrey, M. D., before the Springfield Academy of Medicine, April 4, 1930.

"Coronary Disease," address by Cadis Phipps, M. D., before the Plymouth Medical Society, Spring, 1930.

"The Treatment of Hypertension," address by Cadis Phipps, M. D., before the Framingham Medical Society, Spring, 1930.

"Variations in Blood Pressure," address by Cadis Phipps, M. D., before the Malden Medical Society, October, 1930.

"Acute Multiple Sclerosis in Dogs," address by T. J. Putnam, M. D., before the Boston Society of Psychiatry and Neurology, January 16, 1930.

"Diseases of the Spinal Cord," address by T. J. Putnam, M. D., before the Fall River Medical Society, November 12, 1930.

"Accidents During Electrotherapy and Their Prevention," paper by Dr. Richard Covacks, discussed by Joseph Resnik, M. D., at the New England Physical Therapy Convention, Boston, Mass., April, 1930.

"Crime of Osteosurgeon," paper by Elisha Sears Lewis, discussed by Joseph Resnik, M. D., at the New England Physical Therapy Convention, Boston, Mass., April, 1930.

"Certain Aspects of the Psychoneuroses Found in General Practice," paper read by George P. Reynolds, M. D., before the Joint Meeting of Merrimac County and Center District, Hillsborough County Medical Societies, April 15, 1930.

"The Etiology of Psychoneuroses Encountered in the Practice of Internal Medicine," address by George P. Reynolds, M. D., before the Section of Medicine of the Massachusetts Medical Society at its Annual Meeting, Plymouth, Mass., June 17, 1930.

"Care of Athletic Injuries," address by T. K. Richards, M. D., before the National Convention of Physical Directors Boston, Mass., April, 1930.

"Care and Prevention of Athletic Injuries," address by T. K. Richards, M. D., before the National Collegiate Athletic Association of New York, December 30, 1930.

"Organization Necessary for Medical Supervision of College Athletics," address by T. K. Richards, M. D., before the National Convention of Young Men's Christian Association Physical Directors at Cambridge, Mass., December 15, 1930.

"Myositis Ossificans," address by T. K. Richards, M. D., before the Student Health Association, New York City, December 31, 1929.

"Sprained Ankles," address by T. K. Richards, M. D., before the Wisconsin Medical Society, Boston City Hospital, Winter, 1930.

"Treatment of Athletic Injuries," address by T. K. Richards, M. D., before the Cambridge Medical Improvement Society, March, 1930.

"Series of Ten Lectures on Athletic Injuries," by T. K. Richards, M. D., before the Harvard Summer School of Physical Education, July, 1930.

"The Galapagos Islands," addresses by T. K. Richards, M. D., before the Boston Natural History Society; before the House Officers and Staff at the Boston City Hospital; before the Children's Hospital Alumni Association; also before the Middlesex School and the Harvard Club.

"The Value of Pyelography," address by Augustus Riley, M. D., before the Physicians' Club, Arlington, Mass., November 11, 1930.

"Prevention of Heart Disease," radio talk over WEEL, by William H. Robey, M. D., January 31, 1930.

"Syphilitic Heart Disease as Found in General Practice," address by William H. Robey, M. D., before the combined meeting of New England Heart Association and Manchester Medical Association held at Rice-Varick Hotel, Manchester, N. H., March 11, 1930.

"Prevention of Heart Disease," address by William H. Robey, M. D., before the New England Health Institute, Hotel Statler, April 18, 1930; also before the Good Samaritan Luncheon, Women's Educational and Industrial Union, December 2, 1930.

"Neuritis," paper by Dr. Frank R. Ober, discussion by William H. Robey, M. D., before the Massachusetts Medical Society, Plymouth, Mass., June 17, 1930.

"A Comparative Study of Twenty-two Hundred Tonsillectomized Children with an Equal Number of Controls Three and Ten Years After Operation," discussion of Dr. Albert Kaiser's paper by William H. Robey, M. D., before the American Medical Association, Detroit, Mich., June 26, 1930.

"Medical Ethics," the George W. Gay Lecture, by William H. Robey, M. D., at Harvard Medical School, December 3, 1930, also on December 10, 1930.

"Causes of Heart Disease," address by William H. Robey, M. D., before the School of Occupational Therapy, Cambridge, Mass., December 16, 1930.

"Tropical Diseases," address by George C. Shattuck, M. D., before the Medical Staff of the Chelsea Naval Hospital, October 27, 1930.

"Cutaneous and Blood Sugar Determinations and Diabetic

Acidosis," address by Richard P. Stetson, M. D., before the Yale Medical Society, New Haven, Conn., February 12, 1930.

"Harvard-African Expedition," talk by Richard P. Strong, M. D., illustrated with moving and still pictures, before the Harvard Medical Society of New York, February 27, 1930.

"Low Back Disabilities," by Russell F. Sullivan, M. D., paper read before the Staff of St. Elizabeth's Hospital, March, 1930.

"Deficiencies in Training of the Modern Orthopedic Surgeon," by Russell F. Sullivan, M. D., paper read at the Annual Meeting of the Alumni of the New York Orthopedic Hospital, New York City, April 25, 1930.

"Studies in Mercury Metabolism," address by F. H. L. Taylor, M. D. (with A. G. Young, M. D., as coauthor),

"Low Back Disabilities," by Russell F. Sullivan, M. D., before the Section of Pharmacology, American Association for the Advancement of Science, Detroit, Mich., March, 1930.

"Response Obtained in Healthy Pigeons by Administration of Substances Effective in Pernicious Anemia," address by Janet M. Vaughan, M. D. (with G. L. Muller, M. D., and George R. Minot, M. D., as coauthors), before the American Society of Clinical Investigation, Atlantic City, N. J., May 5, 1930.

"Care of Athletic Injuries," address by Irving J. Walker, M. D., at the National Convention of Physical Directors, Boston, Mass., April, 1930.

"Care and Prevention of Athletic Injuries," address by Irving J. Walker, M. D., before the National Collegiate Athletic Association, New York City, December 30, 1930.

"Organization Necessary for Medical Supervision of College Athletics," address by Irving J. Walker, M. D., at the National Convention of Young Men's Christian Association, Physical Directors at Cambridge, Mass., December 15, 1930.

"Myositis Ossificans," address by Irving J. Walker, M. D., before the Student Health Association, New York City, December 31, 1929.

"What is the Most Desirable Medical Staff Organization to Assure Adequate Control and the Highest Degree of Professional Efficiency?" paper read by Irving J. Walker, M. D., before the Sectional Meeting of the American College of Surgeons, Bancroft Hotel, Worcester, Mass., January 6, 1930.

"Acute Post-operative Intestinal Obstruction," by Irving J. Walker, M. D., paper read before the Holyoke Medical Association, Holyoke, Mass., February 28, 1930.

"Supervision of Private Hospitals," discussion of Dr. Millard Knowlton's paper by Irving J. Walker, M. D., before the New England Health Institute, Boston, Mass., April 16, 1930.

"Abscess of the Spleen," paper read by Irving J. Walker, M. D., before the Clinical Meeting of Boston City Hospital, April 26, 1930; before the Buffalo Surgical Society Clinic at

Boston City Hospital, April 11, 1930; also before the New England Surgical Society, Boston, Mass., September 27, 1930.

"Constitution and Disease," address by Soma Weiss, M. D., before the Boylston Medical Society, Boston, Mass., January 13, 1930.

"The Causes of High Blood Pressure; its Prevention and Management," Harvard Medical School, Public Lecture by Soma Weiss, M. D., Boston, Mass., Sunday, January 19, 1930.

"Hypertension," address by Soma Weiss, M. D., before the Holyoke Medical Society, Holyoke, Mass., January 21, 1930.

"The Development of the Clinical Concept of Arterial Hypertension," address by Soma Weiss, M. D., before the Boston Medical History Club, Boston, Mass., February 17, 1930.

"The Prevention of Hypertension," address by Soma Weiss, M. D., before the New England Health Institute, Boston, Mass., April 17, 1930.

"Drugs Used in Congestive Heart Disease," address by Soma Weiss, M. D., before the Boston City Hospital Alumni, Boston, Mass., April 26, 1930.

"The Circulatory Mechanism and Unilateral Edema in Cerebral Hemiplegia," address by Soma Weiss, M. D., before the American Society for Clinical Investigation, Atlantic City, N. J., May 5, 1930.

"Recent Advances in Measurements of Circulatory Failure," III, address by Soma Weiss, M. D., before the Medizinische Klinik, Vienna, Austria, July 3, 1930.

"The Various Clinical Manifestations of Failure of the Cardiovascular System and their Treatment," address by Soma Weiss, M. D., before the Central Maine Medical Society, Lewiston, Me., October 24, 1930.

"The Relation of Vascular Disease to Psychosis," address by Soma Weiss, M. D., before the Medical Staff of the Worcester State Hospital, Worcester, Mass., November 7, 1930.

"Present Concepts of Circulatory Failure," address by Soma Weiss, M. D., before the Plymouth Medical Society, Abington, Mass., November 20, 1930.

"Normal Blood Pressure and its Measurement," address by Soma Weiss, M. D., before the American Heart Association, Boston, Mass., December 3, 1930.

"Renal Diseases," address by Soma Weiss, M. D., before the Central Maine Medical Society, Lewiston, Me., December 1, 1930.

"The Rational Treatment of Arterial Hypertension," by Soma Weiss, M. D. (with Laurence B. Ellis, M. D., as co-author), before the Section on Pharmacology and Therapeutics at the Eighty-First Annual Session of the American Medical Association, Detroit, Mich., June 25, 1930.

"X-Ray Observations on the Healing of Gastric Ulcer,"

address by Franklin W. White, M. D., before the New England Roentgen Ray Society, January 24, 1930.

"Diagnosis and Treatment of Peptic Ulcer," address by Franklin W. White, M. D., before the Everett Hospital Staff, February 7, 1930.

"Class Teaching in Peptic Ulcer," address by Franklin W. White, M. D. (with I. R. Jankelson, M. D., as co-author), before the Gastro-Enterological Association, May 5, 1930.

"Hematemesis in Gall Bladder Disease," address by Franklin W. White, M. D. (with I. R. Jankelson, M. D., as co-author), before the Association of American Physicians, May 7, 1930.

"Focal Infection with Special Reference to Gall Bladder Disease," paper read by Thomas W. Wickham, M. D., before the Chelsea Medical Society, March, 1930.

"Studies in Mercury Metabolism," address by Albert G. Young, M. D. (with F. H. L. Taylor, M. D., as co-author), before the Section of Pharmacology, American Association for the Advancement of Science, Detroit, Mich., March, 1930.

#### HOUSE OFFICERS.

The Herbert L. Burrell Ether Prize, given for administering anesthetics in the most skilful and humane manner was awarded to Leslie C. Dodson, M. D., of the First Surgical Service, Lawrence J. McCarthy, M. D., of the Fourth Surgical Service, and George W. Rafferty, M. D., of the Third Surgical Service.

In May, 1930, the Trustees appointed a woman interne for the Neurological Service, this being an innovation.

#### CHANGES IN THE HOSPITAL RULES.

As the Hospital is passing through a period of expansion, the rules of the Trustees are undergoing recodification.

During the year, the Department of Surgical Investigation has been put into operation under the guidance of a Director of Surgical Research. This Director is aided by an Assistant and a Technician.

The Committee on Surgical Research of the Senior Staff has been empowered to recommend to the Trustees new appointments to the Department of Surgical Investigation.

The activities of all clinical laboratories have been concentrated under the guidance of the Director of Clinical Laboratories.

A course of post-graduate teaching for local practitioners has been installed in the Out-Patient Department. Teaching given each morning includes general medicine, dermatology, neurology, physiotherapy, immunology, dietetics.

A Fifth Medical Service has been formed as a Boston University teaching service. This creates positions for an additional Resident and for six additional medical house officers.

New rules have been adopted for the Neurological and the Neurosurgical Services.

The Unit System of House Clinical Records has been installed in conjunction with the Out-Patient Records.

The rule has been made that clinical records shall be in the Record Room within a week following the discharge of the patients.

A rule has been made so that the members of the Oral Surgical Staff are allowed to administer anesthetics.

Positions on the Visiting Staff have been changed as follows: Six additional positions were created for Junior Visiting Physicians, so making the number twenty-seven. Two additional positions were created for Assistant Visiting Oral Surgeons, so making the number six. The appointment of Associate Physicians and Associate Surgeons to the various services created the positions.

A position has been created for a Resident Surgeon in the Out-Patient Department.

A third position for a Resident Assistant in Pathology has been created.

Titles have been changed as follows:

A "Visiting Surgeon" has been changed to a "Visiting Surgeon for Urology."

An "Assistant Visiting Surgeon" has been changed to an "Assistant Visiting Surgeon for Urology."

A "Visiting Surgeon" has been changed to "Visiting Surgeon for Neuro-Surgery."

The title "Director of Thorndike Memorial Laboratory" has been changed to "Director of Thorndike Memorial Laboratory, Director of Second Medical Service, Director of Fourth Medical Service."

The titles of the Neurological Department have been changed by striking out the words, "Physicians for Neurology" and inserting the word, "Neurologists."

## GIFTS AND BEQUESTS.

Grateful acknowledgment is made of the following bequests and gifts:

There has been received and added to the Nurses' Fund, the interest of which is used for employment of special nurses for needy patients:

The sum of \$500 sent by his Honor, Mayor James M. Curley, this being a legacy from his lamented wife, Mrs. Mary E. Curley.

The gift of \$2,000 presented by Ex-Mayor Malcolm E. Nichols.

Two checks for \$1,050 each, these being bequests of the late Marcus Morton Keyes; one check being for the benefit of the Main Hospital and the other for the benefit of the Relief Stations.

A legacy of \$1,000 received under the will of the late Benjamin Levy.

The sum of \$520 received from a trust fund established by the late Abraham M. Gutterman.

The amount of \$530.47 received under the will of the deceased, Samuel Hirschberg.

A prize of \$25 won in the Legal Stamp Company Voting Contest.

A gift of \$15 received from Mr. Joseph A. Latourneau, whose wife was a Hospital patient.

There has been added to the Albert N. Blodgett Fund, the interest of which is used for the employment of special nurses for needy patients, the sum of \$824.32, this being income from the estate of Doctor Blodgett.

A fine water color portrait of the former President of the Board of Trustees, Mr. Abraham Shuman, was presented to the Hospital by his daughter, Mrs. Theresa Shuman Ratshesky. It now hangs in the Administration Building.

An expensive piece of apparatus for the optical registration of the cardiac output in man, paid for by gift funds made available for work undertaken under Doctor Minot's direction, has been gratefully received.

The donation by the E. F. Mahady Company of all supplies used by the First-Aid Hospital maintained by this Hospital for the benefit of the National Convention of the American Legion in Boston, was much appreciated.

Much joy has been brought to patients by the numerous donations of toys, books, etc., for children at Christ-

mas time, and the many gifts received through the Department of Social Work for the comfort of those in exigencies.

At the close of this great year in the life of the Hospital, we desire to tender to his Honor the Mayor and to the City Council our grateful acknowledgments for their very important part in the noble work of building up this institution.

To Dr. John J. Dowling our appreciation is due for his efficient and devoted administrative work, and his intelligent oversight and direction in the new construction.

The new buildings give great satisfaction, and congratulations are extended to the architects, Messrs. James H. Ritchie and Associates, for their splendid work.

Appreciation is due the Professional Staff of the Hospital for their devoted cooperation in all that leads to the betterment of the sick poor of Boston.

The outstanding features of the Hospital life during the past year are not to be found alone in the fine new buildings, with their improved equipment, which have arisen, but in the advances in scientific medical care which are revealed in the various department reports appearing in this volume.

These advances must be a matter of deep congratulation to the Mayor and to the City Council as well as to the Hospital Trustees.

Respectfully submitted,

JOSEPH P. MANNING, *President.*

HENRY S. ROWEN, M. D., *Secretary.*

GEORGE G. SEARS, M. D.

CARL DREYFUS.

KARL ADAMS.

## REPORT OF THE SUPERINTENDENT AND MEDICAL DIRECTOR.

BOSTON CITY HOSPITAL, January 5, 1931.

*To the Trustees.*

GENTLEMEN,— I present herewith the annual report of the Hospital Department for the year 1930.

On June 1, 1864, the Boston City Hospital was opened for the admission of patients. Since that time the number of house patients treated in the different departments has been 766,398 and the number of out-patients, 2,830,203. The table on page 99 shows the number of patients who have been treated in the hospital proper and the South Department during the last ten years. The principal statistics for the past year are shown on pages 101, 102. The other tables are self-explanatory.

Patients treated in the hospital during the year:

Medical services. . . . .	7,592
Surgical services. . . . .	9,391
Gynecological and obstetrical services . . . . .	6,292
Pediatric service . . . . .	1,114
Ophthalmic service . . . . .	194
Aural and laryngological service . . . . .	3,247
Neurological service . . . . .	452
Neurosurgical service . . . . .	172
Dermatological service . . . . .	211
Total . . . . .	<u>28,665</u>

Number of visits of patients to the hospital for advice and treatment in the Out-Patient Departments:

Medical . . . . .	27,751
Medical afternoon (consultation) . . . . .	1,629
Surgical . . . . .	63,137
Fracture . . . . .	31,458
Bone and joint . . . . .	603
Genito-urinary . . . . .	19,035
Gynecological . . . . .	6,590
Pre-natal . . . . .	6,842
Carried forward . . . . .	<u>157,045</u>

<i>Brought forward</i> . . . . .	157,045
Urological . . . . .	318
Pediatric . . . . .	8,763
Baby hygiene . . . . .	713
Eye . . . . .	14,623
Ear, nose and throat . . . . .	19,261
Dermatological . . . . .	25,644
Neurological . . . . .	2,546
Immunology . . . . .	11,329
Oral surgery . . . . .	3,159
Physical therapeutics . . . . .	43,972
Cardiac . . . . .	883
Circulatory . . . . .	4,821
Blood . . . . .	270
Metabolism . . . . .	4,725
Gastro-intestinal . . . . .	1,893
Thyroid . . . . .	544
X-ray . . . . .	36,936
Accident . . . . .	17,926
 Total . . . . .	 <u>355,371</u>

TABLE OF ADMISSIONS AND DEATHS FROM FEBRUARY 1, 1921, TO JANUARY 1, 1931.  
*Hospital Proper and South Department.*

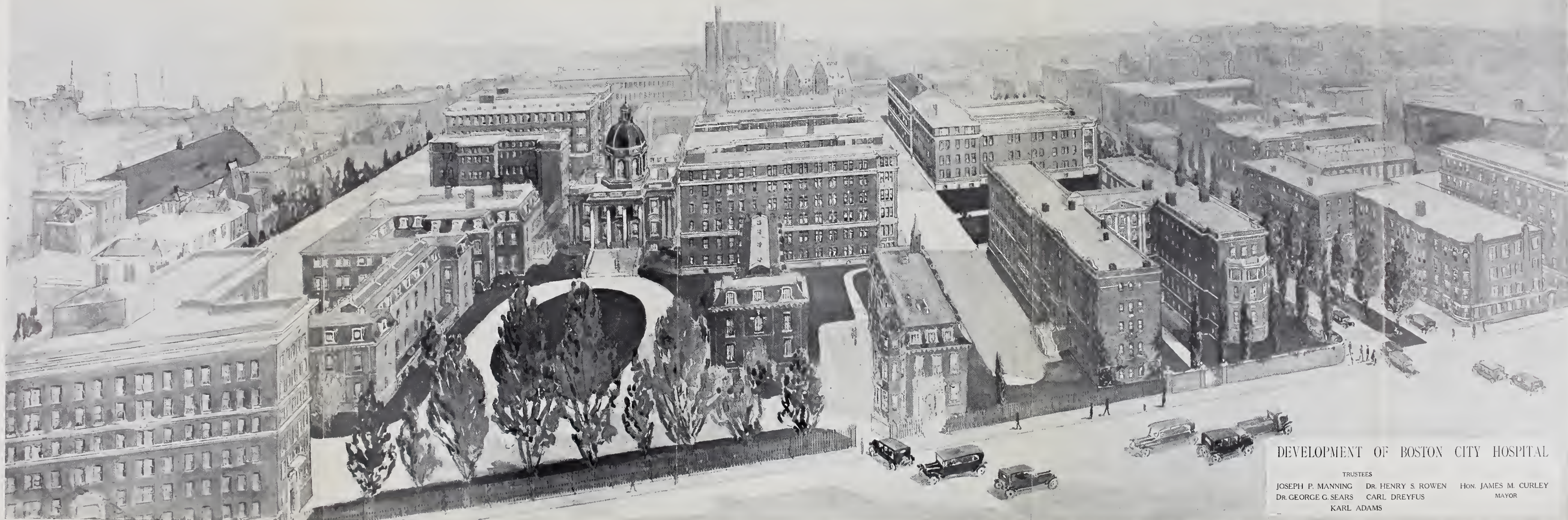
	Patients Admitted.	Patients Accidentally Injured Admitted.	Number of Out- Patients Treated.	Number of Patients in Hospital at Beginning of Year.	Number of Ward Patients Treated.	Died.	Rate of Mortality.
February 1, 1921, to January 31, 1922.....	18,844	1,915	32,377	979	19,823	1,400	.071
February 1, 1922, to January 31, 1923.....	22,174	2,601	37,419	993	23,167	1,796	.078
February 1, 1923, to January 31, 1924.....	23,181	2,485	38,690	1,097	24,278	1,861	.077
February 1, 1924, to January 31, 1925.....	23,646	2,675	45,095	1,150	24,796	1,785	.072
February 1, 1925, to December 31, 1925.....	20,349	2,149	44,750	1,130	21,479	1,627	.076
January 1, 1926, to December 31, 1926.....	21,460	1,928	45,994	884	22,344	1,759	.079
January 1, 1927, to December 31, 1927.....	24,280	1,426	49,059	919	25,199	1,882	.075
January 1, 1928, to December 31, 1928.....	24,462	1,448	52,610	1,048	25,510	1,913	.075
January 1, 1929, to December 31, 1929.....	25,843	1,694	82,483	977	26,820	1,986	.075
January 1, 1930, to December 31, 1930.....	29,647	2,357	98,154	1,143	30,790	2,008	.065

The total number of patients admitted to the wards since the opening of the hospital and South Department has been 711,926 and the number of out-patients has been 2,356,776.

## HOSPITAL PROPER.

APPLICANTS EXAMINED FOR ADMISSION DURING YEAR  
1930.

MONTH.	Number Examined.	Number Admitted.	Number not Admitted.
January.....	2,315	2,288	27
February.....	2,056	2,033	23
March.....	2,437	2,389	48
April.....	2,336	2,309	27
May.....	2,388	2,350	38
June.....	2,293	2,270	23
July.....	2,396	2,372	24
August.....	2,302	2,277	25
September.....	2,441	2,414	27
October.....	2,452	2,428	24
November.....	2,247	2,229	18
December.....	2,390	2,362	28
Totals.....	28,053	27,721	332



DEVELOPMENT OF BOSTON CITY HOSPITAL

TRUSTEES

JOSEPH P. MANNING	DR. HENRY S. ROWEN	HON. JAMES M. CURLEY
DR. GEORGE G. SEARS	CARL DREYFUS	MAYOR
KARL ADAMS		



## HOSPITAL PROPER.

## PRINCIPAL STATISTICS FOR THE YEAR 1930.

*Number of Patients.*

Number of patients remaining in the hospital proper December 31, 1929 . . . . .	944
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## Admitted during the year 1930:

Medical . . . . .	7,284	
Surgical . . . . .	9,042	
Gynecological and obstetrical . . . . .	6,116	
Pediatric . . . . .	1,060	
Ophthalmic . . . . .	190	
Aural and laryngological . . . . .	3,220	
Neurological . . . . .	436	
Neurosurgical . . . . .	172	
Dermatological . . . . .	201	
	<hr/>	27,721
Treated during the year . . . . .		28,665
Discharged during the year . . . . .	25,639	
Died during the year . . . . .	1,927	
	<hr/>	27,566

Number of patients remaining in the hospital proper December 31, 1930 . . . . .	1,099
Number of births during the year . . . . .	2,005
Number of deaths . . . . .	1,927
Number of deaths within forty-eight hours of admis- sion . . . . .	661
Largest number of patients in hospital on any one day,	1,167
Smallest number of patients in hospital on any one day . . . . .	944
Daily average number of patients . . . . .	1,044.1
Average number of days' stay of patients . . . . .	13.3
Number of weeks' treatment given in hospital . . . . .	54,443
Number of days' treatment given in hospital. . . . .	381,104
Number of applicants for admission to hospital . . . . .	28,053
Number of applicants rejected . . . . .	332
Number of out-patients treated during year . . . . .	98,154
Number of visits made by out-patients during year . . . . .	355,371
Patients carried in ambulances . . . . .	9,167
Number of patients accidentally injured admitted to the wards . . . . .	2,357

### Number of out-patients treated in the Out-Patient Department:

Clinics.	Total Patients Treated.	New Admissions.
Medical . . . . .	13,416	10,821
Medical afternoon (consultation) . . . . .	779	667
Surgical . . . . .	19,594	15,398
Fracture . . . . .	10,498	9,632
Bone and joint . . . . .	307	266
Genito-urinary . . . . .	1,370	1,024
Gynecological . . . . .	2,593	1,702
Pre-natal . . . . .	3,203	1,558
Urological . . . . .	97	86
Pediatric . . . . .	4,748	3,511
Baby hygiene . . . . .	174	140
Eye . . . . .	5,122	3,779
Ear, nose and throat . . . . .	9,487	7,630
Dermatological . . . . .	5,258	4,247
Neurological . . . . .	921	768
Immunology . . . . .	1,301	907
Oral surgery . . . . .	1,997	1,334
Physical therapeutics . . . . .	3,345	2,981
Cardiac . . . . .	212	180
Circulatory . . . . .	789	447
Blood . . . . .	50	19
Metabolism . . . . .	299	271
Gastro-intestinal . . . . .	600	504
Thyroid . . . . .	149	105
X-ray (estimated) . . . . .	22,149	17,730
Accidents . . . . .	*13,941	*13,941
Totals . . . . .	<u>†98,154</u>	<u>†57,153</u>

\* Of the accident cases, 5,379 were treated in the Out-Patient Building and 8,562 on the accident floor.

† 98,154 is the number of individual out-patients treated (not the total of the column), many of them having been counted in more than one department.

‡ 57,153 is the total number of admissions, not the total of the column.

### PRESENT CAPACITY OF THE HOSPITAL DEPARTMENT.

The schedule of beds is as follows:

	Beds.	Cribs.	Bassinets.	Totals.
Hospital proper. . . . .	1,176	38	129	1,343
South Department. . . . .	145	149	6	300
Sanatorium Division. . . . .	582	.....	.....	582
Haymarket Square Relief Station. . . . .	27	2	.....	29
East Boston Relief Station. . . . .	10	1	1	12
Convalescent Home. . . . .	34	.....	.....	34
Totals. . . . .	1,974	190	136	2,300

The distribution of beds of the Main Hospital is as follows:

SERVICES.	WARDS.							PRIVATE AND SEMI-PRIVATE.				Grand Totals.
	Males.	Females.	Both Sexes.	Children (Males).	Children (Females).	Children (Both Sexes).	Totals.	Males.	Females.	Both Sexes.	Totals.	
Medical.....	225	200	9	.....	.....	.....	434	.....	.....	4	4	438
Surgical.....	160	148	8	.....	.....	.....	316	14	18	.....	32	348
Obstetrical.....	.....	78	.....	.....	.....	.....	78	.....	.....	.....	.....	78
Gynecological.....	.....	50	.....	.....	.....	.....	50	.....	.....	.....	.....	50
Neurological and Neurosurgical,	32	18	.....	.....	.....	.....	50	3	3	.....	6	56
Ophthalmic, Aural, and all serv- ices.....	9	5	.....	.....	.....	.....	14	.....	5	6	11	25
Dermatological.....	6	4	.....	.....	.....	.....	10	.....	.....	.....	.....	10
Pediatric and all services.....	.....	.....	.....	24	28	64	116	.....	.....	.....	.....	116
All services.....	55	.....	.....	.....	.....	.....	55	.....	.....	.....	.....	55
Total beds.....	487	503	17	24	28	64	1,123	17	26	10	53	1,176
Cribs.....	.....	.....	.....	.....	.....	38	38	.....	.....	.....	.....	38
Bassinets.....	.....	.....	.....	.....	.....	129	129	.....	.....	.....	.....	129
Totals.....	487	503	17	24	28	231	1,290	17	26	10	53	1,343

STATISTICS OF PATIENTS ACCORDING TO SERVICES.  
YEAR 1930.

SERVICES.	In Hospital January 1, 1930.	Admitted.	Discharged.	Died.	Total Discharged and Died.	In Hospital January 1, 1931.
First Surgical.....	48	1,677	1,589	85	1,674	51
Second Surgical.....	84	1,739	1,658	77	1,735	88
Third Surgical.....	40	1,591	1,508	79	1,587	44
Fourth Surgical.....	52	1,523	1,422	92	1,514	61
Fifth Surgical.....	64	1,499	1,386	97	1,483	80
Sixth Surgical.....	61	1,013	954	32	986	88
Gynecological and Obstetrical,	176	6,116	5,895	135	6,030	262
First Medical.....	67	1,688	1,409	284	1,693	62
Second Medical.....	60	1,685	1,507	207	1,714	31
Third Medical.....	66	1,669	1,416	266	1,682	53
Fourth Medical.....	115	1,920	1,678	289	1,967	68
Fifth Medical.....	.....	322	211	37	248	74
Pediatric.....	54	1,060	900	176	1,076	38
Ophthalmic.....	4	190	192	2	194	.....
Aural and Laryngological.....	27	3,220	3,182	18	3,200	47
Neurological.....	16	436	422	30	452	.....
Neurosurgical.....	.....	172	115	18	133	39
Dermatological.....	10	201	195	3	198	13
Totals.....	944	27,721	25,639	1,927	27,566	1,099

RECEIPTS AND EXPENDITURES.

ALL DEPARTMENTS EXCEPT SANATORIUM DIVISION.

*Receipts.*

City appropriation . . . . .	\$2,908,098 67
Interest on Trust Funds . . . . .	2,580 05
	<hr/>
	\$2,910,678 72

Deduct:

Balance returned to City Treasury . . . . .	12,316 57
---	-----------

\$2,898,362 15

*Expenditures.*

Hospital proper and its subdivisions . . . . .	\$2,172,178 35
Out-Patient Department . . . . .	227,616 10
South Department . . . . .	327,376 09
Haymarket Square Relief Station . . . . .	92,819 30
East Boston Relief Station . . . . .	46,686 87
Convalescent Home . . . . .	21,884 33
West Department . . . . .	9,801 11
Totals . . . . .	<u>\$2,898,362 15</u>

## MAIN HOSPITAL.

APPLICANTS NOT ADMITTED FROM JANUARY 1, 1930,  
TO DECEMBER 31, 1930, INCLUSIVE.

	At First Rejected.	Admitted Later.	Finally Rejected.
Self-rejected or deferred.....	279	.....	139
Self-rejected or deferred, but admitted within three days.....	.....	60	.....
Self-rejected or deferred, but admitted later.....	.....	80	.....
State settlement.....	175	.....	139
State settlement, but admitted within three days....	.....	16	.....
State settlement, but admitted later.....	.....	20	.....
Non-resident.....	52	.....	30
Non-resident, but admitted within three days.....	.....	10	.....
Non-resident, but admitted later.....	.....	12	.....
Referred to other public institutions.....	28	4	24
Totals.....	534	202	332

## RECORD OF AMBULANCE WORK.

YEAR 1930.

*Transportation to the Hospital.*

## Trips to:

Business center . . . . .	289
North End . . . . .	205
West End . . . . .	251
Back Bay . . . . .	263
South End . . . . .	999
Roxbury . . . . .	1,034
West Roxbury . . . . .	131
Dorchester . . . . .	804
South Boston . . . . .	666
East Boston . . . . .	658
Charlestown . . . . .	626
Jamaica Plain . . . . .	354
Brighton . . . . .	336
Roslindale . . . . .	172
Hyde Park . . . . .	121
South Department . . . . .	61
<hr/>	
Total trips in . . . . .	6,970
Did not come . . . . .	107
<hr/>	
Patients brought . . . . .	<u>6,863</u>

*Transportation from the Hospital.*

Convalescent Home . . . . .	310
Patients' homes . . . . .	157
Other hospitals . . . . .	630
<hr/>	
Trips out . . . . .	1,097
Carried extra . . . . .	1,554
<hr/>	
Patients carried . . . . .	<u>2,651</u>

*Summaries.*

Total number of trips . . . . .	<u>8,067</u>
Total number of patients carried . . . . .	<u>9,514</u>

## RECORD OF WORK DONE BY SEDAN.

	Trips.	Miles.
Bringing physicians and surgeons, also carrying house officers to obtain autopsy permits.....	1,233	7,351
Carrying patients to Convalescent Home.....	310	3,410
Totals.....	1,543	10,761

## CENSUS OF DAYS' BOARD OF ALL PERSONS.

YEAR 1930.

	Patients.	Officers and Em- ployees.	House Officers.	Special Nurses.	Total Days' Board.
Hospital Proper.....	381,104	375,593	26,433	22,534	805,664
South Department.....	66,115	48,105	4,992	873	120,085
Haymarket Square Relief Station....	3,256	12,175	2,512	404	18,347
East Boston Relief Station.....	579	7,867	.....	112	8,558
Convalescent Home.....	5,582	2,744	.....	.....	8,326
Totals.....	456,636	446,484	33,937	23,923	960,980

## DAILY AVERAGE OF PERSONS.

YEAR 1930.

	Patients.	Officers and Em- ployees.	House Officers.	Special Nurses.	Total All Persons.
Hospital Proper.....	1,044.1	1,029.0	72.4	61.8	2,207.3
South Department.....	181.1	131.8	13.7	2.4	329.0
Haymarket Square Relief Station....	8.9	33.4	6.9	1.1	50.3
East Boston Relief Station.....	1.6	21.5	.....	.3	23.4
Convalescent Home.....	15.3	7.5	.....	.....	22.8
Totals.....	1,251.0	1,223.2	93.0	65.6	2,632.8

# MAXIMUM AND MINIMUM NUMBER OF DAYS' BOARD GIVEN.

YEAR 1930.

	Hospital Proper.	South Department.	Haymarket Square Relief Station.	East Boston Relief Station.	Convalescent Home.	All Departments (Except Sanatorium Division).
Maximum number of days' board of patients..	1,167	294	20	6	28	1,396
Minimum number of days' board of patients. .	944	76	2	0	6	1,079
Maximum number of days' board of persons..	2,425	449	67	29	36	2,785
Minimum number of days' board of persons...	2,015	187	35	20	13	2,343

## NATIVITY OF PATIENTS ADMITTED DURING YEAR 1930.

Boston . . . . .	11,582	<i>Brought forward</i> . . . . .	25,668
Other cities and towns in Massachusetts . . . . .	4,224	China . . . . .	36
Maine . . . . .	559	France . . . . .	33
New Hampshire . . . . .	284	Austria Hungary . . . . .	25
Vermont . . . . .	145	Turkey . . . . .	19
Rhode Island . . . . .	186	Roumania . . . . .	15
Connecticut . . . . .	147	Cape Verde Islands . . . . .	14
Other states . . . . .	1,429	Finland . . . . .	14
Ireland . . . . .	2,347	Holland . . . . .	14
British Provinces . . . . .	1,606	Denmark . . . . .	10
Italy . . . . .	802	Latvia . . . . .	10
Russia . . . . .	689	South America . . . . .	9
England . . . . .	327	Spain . . . . .	8
Poland . . . . .	233	Belgium . . . . .	6
Newfoundland . . . . .	206	Switzerland . . . . .	6
Scotland . . . . .	160	Australia . . . . .	5
Lithuania . . . . .	158	Africa . . . . .	5
Germany . . . . .	121	Cuba . . . . .	4
Sweden . . . . .	107	Panama . . . . .	4
Greece . . . . .	84	Bermuda . . . . .	4
West Indies . . . . .	70	Japan . . . . .	4
Syria . . . . .	67	Mexico . . . . .	3
Armenia . . . . .	50	Palestine . . . . .	3
Portugal . . . . .	43	Barbadoes . . . . .	2
Norway . . . . .	42	India . . . . .	2
		Czecho-Slovakia . . . . .	2
		Albania . . . . .	1
<i>Carried forward</i> . . . . .	25,668	<i>Carried forward</i> . . . . .	25,926

<i>Brought forward</i> . . . . .	25,926	<i>Brought forward</i> . . . . .	25,932
Galway . . . . .	1	Canal Zone . . . . .	1
Jugo-Slavia . . . . .	1	Asia . . . . .	1
Philippine Islands . . . . .	1	Siberia . . . . .	1
Astthonia . . . . .	1	Egypt . . . . .	1
Assyria . . . . .	1	Hawaiian Islands . . . . .	1
Siam . . . . .	1	Unknown . . . . .	1,784
<hr/>		<hr/>	
<i>Carried forward</i> . . . . .	25,932	Total . . . . .	<u>27,721</u>

CONDITION OF PATIENTS DISCHARGED DURING YEAR  
1930.

Well . . . . .	654	<i>Brought forward</i> . . . . .	25,604
Relieved . . . . .	21,495	Eloped . . . . .	12
Not relieved . . . . .	3,455	Died . . . . .	1,950
<hr/>		<hr/>	
<i>Carried forward</i> . . . . .	25,604	Total . . . . .	<u>27,566</u>

## SOUTH DEPARTMENT.

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### PRINCIPAL STATISTICS FOR THE YEAR 1930.

Number of patients remaining in the South Department, December 31, 1929 . . . . .	199
Admitted from January 1, 1930, to December 31, 1930, . . . . .	1,926
	<hr/>
Treated during the year . . . . .	2,125
Discharged during the year . . . . . 1,881	
Died during the year . . . . . 81	<hr/>
	1,962
	<hr/>
Number of patients remaining December 31, 1930 . . . . .	163
Maximum number of patients at any one time . . . . .	294
Minimum number of patients at any one time . . . . .	76
Daily average number of patients . . . . .	181.1
Average number of days' stay of patients . . . . .	31.11
Number of days' treatment given patients . . . . .	66,115
Number of weeks' treatment given patients . . . . .	9,445
Number of patients admitted over 15 years of age . . . . .	356
Average age of patients . . . . .	9.32
Number of patients dying within 48 hours of admission, . . . . .	28
Percentage of deaths to discharges . . . . .	4.13
Death rate from all diseases . . . . .	3.81
Death rate from all diseases deducting deaths within 24 hours of admission . . . . .	2.78
Number of applicants examined for admission . . . . .	1,999
Number of applicants rejected . . . . .	73

NATIVITY OF PATIENTS ADMITTED TO THE SOUTH  
DEPARTMENT FOR THE YEAR 1930.

Boston . . . . .	1,221	<i>Brought forward</i> . . . . .	1,819
Massachusetts . . . . .	313	Italy . . . . .	5
Maine . . . . .	47	Scotland . . . . .	3
New Hampshire . . . . .	20	Russia . . . . .	2
Vermont . . . . .	16	Germany . . . . .	3
Rhode Island . . . . .	15	Lithuania . . . . .	1
Connecticut . . . . .	10	Panama Canal Zone, . . . . .	1
Other states . . . . .	66	Sweden . . . . .	2
British Provinces . . . . .	73	French West Indies, . . . . .	1
Denmark . . . . .	1	Poland . . . . .	1
Armenia . . . . .	1	Portugal . . . . .	1
Ireland . . . . .	30	Unknown . . . . .	87
England . . . . .	6		
		Total . . . . .	<u>1,926</u>
<i>Carried forward</i> . . . . .	1,819		

CONDITIONS OF PATIENTS DISCHARGED FROM THE SOUTH  
DEPARTMENT FOR THE YEAR 1930.

Well . . . . .	1,707	<i>Brought forward</i> . . . . .	1,881
Relieved . . . . .	39	Died . . . . .	81
Not relieved . . . . .	135		
		Total . . . . .	<u>1,962</u>
<i>Carried forward</i> . . . . .	1,881		

APPLICANTS EXAMINED FOR ADMISSION TO THE SOUTH  
DEPARTMENT FOR THE YEAR 1930.

MONTHS.	Number Examined.	Number Admitted.	Number Not Admitted.
January.....	217	214	3
February.....	166	162	4
March.....	264	255	9
April.....	295	283	12
May.....	264	250	14
June.....	171	168	3
July.....	101	93	8
August.....	63	57	6
September.....	80	73	7
October.....	88	87	1
November.....	120	117	3
December.....	170	167	3
Totals.....	1,999	1,926	73

# APPLICANTS NOT ADMITTED TO THE SOUTH DEPARTMENT FOR THE YEAR 1930.

CAUSE OF REJECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Self-rejected. ....	1	2	7	8	4	2	3	...	...	...	...	...	27
Want of accommodation. ....	...	1	2	3	10	...	...	4	2	...	...	...	22
No contagious disease. ....	2	1	...	...	...	1	5	2	5	1	3	3	23
Dead on arrival. ....	...	...	...	1	...	...	...	...	...	...	...	...	1
Totals. ....	3	4	9	12	14	3	8	6	7	1	3	3	73

## RECORD OF AMBULANCE WORK IN BRINGING PATIENTS TO SOUTH DEPARTMENT FOR THE YEAR 1930.

Trips to:

Business center . . . . .	5
North End . . . . .	15
West End . . . . .	58
Back Bay . . . . .	20
South End . . . . .	305
Roxbury . . . . .	269
West Roxbury . . . . .	3
Dorchester . . . . .	194
South Boston . . . . .	104
East Boston . . . . .	104
Charlestown . . . . .	86
Jamaica Plain . . . . .	64
Brighton . . . . .	47
Roslindale . . . . .	18
Hyde Park . . . . .	11
Suburban towns . . . . .	2

Total number of trips . . . . .	1,305
Carried extra . . . . .	82
Patients rejected . . . . .	8
Patients self-rejected . . . . .	30
Total patients carried . . . . .	<u>1,349</u>

Subsistence s  
 Fuel.....  
 Medical supp  
 Salaries and  
 Buildings, re  
 Grounds....  
 Ice.....  
 Electric light  
 Soap, cleansi  
 Furniture, fu  
 Beds and bea  
 Dry goods, t  
 Stationery, p  
 Transportati  
 Telephone an  
 Laundry rep  
 Garage and i  
 Animals and  
 Training Sch  
 General su

## TABLE NO. 1.



**Table No. 1.**  
**DISBURSEMENTS ACCORDING TO VARIOUS SUBDIVISIONS.**

	Hospital Proper.	Out-Patient Department.	Pathological Laboratory.	Thorndike Laboratory.	X-Ray and Photo- graphic Depart- ment.	Depart- ment for Physical Thera- peutics.	Depart- ment of Immunology.	Clinical Laboratory.	Blood Laboratory.	Depart- ment of Oral Surgery.	Depart- ment of Social Work.	Settlement Account.	South Department.	Haymarket Square Relief Station.	East Boston Relief Station.	Conva- lescent Home.	West Depart- ment.	Totals.
Subsistence supplies.....	\$551,361 55												\$82,066 01	\$17,108 45	\$3,763 47	\$4,551 81		\$658,851 29
Fuel.....	65,131 43	\$8,096 40	\$3,036 15	\$2,106 52	\$2,953 74								21,482 17	1,862 24	767 71	801 00		106,237 36
Medical supplies.....	164,286 07	12,903 58	6,760 39	11,107 47	41,245 88	\$2,140 25	\$465 87	\$5,120 79	\$237 58	\$519 82			7,644 20	7,451 29	2,023 54	137 32		262,044 05
Salaries and labor.....	969,471 37	97,004 00	37,979 50	62,788 82	37,427 84	22,368 50	5,484 37	5,729 64	2,215 84	1,482 17	\$24,684 80	\$1,579 35	174,410 68	55,589 64	35,317 15	11,543 36	\$4,862 86	1,549,939 89
Buildings, repairs.....	57,391 43	1,054 84	1,009 68	1,089 03	1,096 29								6,923 90	1,778 15	852 24	570 95	4,280 44	76,046 95
Grounds.....	2,383 81												878 30	27 75		252 87		3,542 73
Ice.....	10,230 94												1,595 69	439 06	288 91	350 10		12,904 70
Electric lighting, power and gas.....	12,209 39	189 24	276 83	453 84	308 07	110 65							1,366 78	1,679 67	510 32	1,789 64	613 81	19,508 24
Soap, cleansing stuffs, matches, etc.....	14,408 70	325 92	37 33	22 52	15 64	12 74	4 68		1 02	26			1,876 69	313 58	54 40	31 76		17,105 24
Furniture, furnishings and fixtures.....	57,439 77	3 390 09	384 77	1,059 39	1,091 86	201 13	35 41	1 20	1 05	14 66	153 01	62 05	5,320 23	960 47	312 07	352 18		70,779 34
Beds and bedding.....	7,836 66	309 03	8 05	34 41	70 47			24 93					3,363 52	812 97	183 28	141 16		12,784 48
Dry goods, uniforms and clothing.....	16,267 24	135 74	106 62	206 69	115 09	129 47		166 10	4 00				4,910 86	831 84	195 89	183 34		23,252 88
Stationery, printing, postage and advertising.....	14,203 06	3,120 95	714 79	678 18	1,285 46	109 23	15 74				526 77	569 17	1,691 17	292 69	162 08	9 00		23,378 29
Transportation, cartage and freight.....	1,139 80	11 36	9 40	27 16	20 92			66			497 00		5 00	222 65	110 00	40 00		2,083 95
Telephone and telegraphs.....	5,765 28	750 59	68 23	136 47	136 47	34 12		34 12			965 29	153 53	3,623 77	716 94	210 47	95 81	44 00	12,735 09
Laundry repairs, etc.....	10,693 85	124 78	34 03	79 40	22 69	34 03							2,123 72	228 78	102 09	23 69		13,467 06
Garage and ambulance: General supplies.....	8,970 84												990 25	617 85	182 62	91 46		10,853 02
Animals and their maintenance.....			754 03	2,118 08														2,872 11
Training School for Nurses including Nurses' Homes:																		
General supplies, medical supplies and building repairs.....	9,487 71	107 82											1,078 14	53 91	53 90			10,781 48
Annual reports.....	873 59												132 92	84 59	84 59	84 59		1,260 28
Medical library.....	1,624 25																	1,624 25
Loose leaf records: General expenses.....	3,754 79	161 70											211 30					4,127 79
Incidentals.....	1,213 06	74 00		876 06									18 56					2,181 68
Totals.....	\$1,986,144 59	\$127,760 04	\$51,179 80	\$82,784 04	\$85,790 42	\$25,140 12	\$6,006 07	\$11,077 44	\$2,459 49	\$2,016 91	\$26,826 87	\$2,364 10	\$321,713 86	\$91,072 52	\$45,174 73	\$21,050 04	\$9,801 11	\$2,898,362 15
Adjustment:																		
(A) Pathological Laboratory.....	86% 44,014 63	4% 2,047 19											100% 5,117 98					
(B) Thorndike Memorial.....	100% 82,784 04																	
(C) X-Ray and Photographic Department.....	62% 44,611 02	48% 41,179 40																
(D) Department of Physical Therapeutics.....	19% 4,776 62	81% 20,363 50																
(E) Department of Immunology.....	4% 240 24	60% 5,765 83																
(F) Clinical Laboratory.....	82% 9,083 50	18% 1,993 94																
(G) Blood Laboratory.....	60% 1,475 69	40% 983 80																
(H) Department of Oral Surgery.....	32% 645 41	68% 1,371 50																
(I) Department of Social Work.....	50% 13,413 44	48% 13,011 03											1 1/2% 402 40					
(J) Settlement Account.....	94% 2,222 25												6% 141 85					
Totals.....	\$2,189,411 43	\$214,476 23											\$327,376 09	\$91,072 52	\$45,174 73	\$21,050 04	\$9,801 11	\$2,898,362 15
Charged from hospital on account of board of employees:																		
Out-Patient Department.....	\$13,139 87	+13,139 87																
Haymarket Square Relief Station.....	1,746 78													+1,746 78				
East Boston Relief Station.....	1,512 14														+1,512 14			
Convalescent Home.....	834 29															+834 29		
	-17,233 08																	
Total operating expenses.....	\$2,172,178 35	\$227,616 10											\$327,376 09	\$92,819 30	\$46,686 87	\$21,884 33	\$9,801 11	\$2,898,362 15
Deduct for permanent improvements and extraordinary expenditures.....	18,407 99													482 27		800 00	1,698 00	21,388 26
	\$2,153,770 36	\$227,616 10											\$327,376 09	\$92,337 03	\$46,686 87	\$21,084 33	\$8,103 11	\$2,876,973 89
Deduct increase in stock on hand more than January 1, 1930.....	5,688 00	1,239 00													224 00			7,151 00
Add decrease in stock on hand less than January 1, 1930.....													305 00	644 00		295 00	11 00	1,255 00
Amount properly chargeable to maintenance.....	\$2,148,082 36	\$226,377 10											\$327,681 09	\$92,981 03	\$46,462 87	\$21,379 33	\$8,114 11	\$2,871,077 89
Cost per day per ward patient.....	5 64												4 96	5 54	5 54	3 83		
Cost per visit per out-patient.....		64												2 84	1 31			



Table No. 2.

## BOSTON CITY HOSPITAL GENERAL DIVISION, 1930. EXPENDITURES IN ACCORDANCE WITH THE UNIFORM SYSTEM OF HOSPITAL ACCOUNTING.

1930.	MAIN HOSPITAL.		OUT-PATIENT DEPARTMENT.		HAYMARKET SQUARE RELIEF STATION.		EAST BOSTON RELIEF STATION.		CONVALESCENT HOME.		WEST DEPARTMENT.		Total Expenditures.	Total Expenditures.
	Expenditures, Salaries and Expenses.	Totals.	Expenditures, Salaries and Expenses.	Totals.	Expenditures, Salaries and Expenses.	Totals.	Expenditures, Salaries and Expenses.	Totals.	Expenditures, Salaries and Expenses.	Totals.	Expenditures, Salaries and Expenses.	Totals.		
Administration														
Salaries.....	\$161,060 80		\$43,243 38		\$15,536 52		\$8,858 20		\$2,279 39		\$63 58		\$265,855 47	
Expenses.....	29,249 37	\$190,310 17	4,033 24	\$47,276 62	1,009 63	\$16,546 15	372 55	\$9,230 75	104 81	\$2,384 20	44 00	\$107 58		\$265,855 47
PROFESSIONAL CARE OF PATIENTS.														
Physicians:														
Salaries.....		8,427 86											\$8,427 86	
Superintendent of Nurses and Assistants:														
Salaries.....		17,317 61		1,550 00		1,779 19		1,429 11					22,075 91	
Graduate Nurses:														
Salaries.....		124,019 02		15,669 61		2,313 38		105 97		1,563 38			143,671 36	
Undergraduate Nurses:														
Salaries.....		40,100 62		702 00		568 25		389 44					41,760 31	
Male Nurses:														
Salaries.....		13,634 01		1,262 38									14,896 39	
Ward Employees:														
Salaries.....		174,989 71		5,443 89		3,483 91		2,667 46					186,584 97	
Apothecaries and Assistants:														
Salaries.....		11,103 61		569 60		341 76		227 84		170 88			12,413 69	
Medical and Surgical Supplies:														
Expenses.....		171,526 85		12,903 58		6,199 43		1,937 34		137 32			192,704 52	
X-Ray and Photographic Department:														
Salaries.....	\$19,462 48		\$17,965 36		\$1,017 71									
Expenses.....	25,551 96		23,214 04		1,251 86		\$86 20							
		45,014 44		41,179 40		2,269 57		86 20					88,549 61	
Pathological Laboratory:														
Salaries.....	96%		4%											
Expenses.....	\$36,460 32		\$1,519 18											
	12,672 29	49,132 61	528 01	2,047 19									51,179 80	
Thorndike Memorial Laboratory:														
Salaries.....	100%													
Expenses.....	\$62,788 82													
	19,995 22	82,784 04											82,784 04	
Clinical Laboratory:														
Salaries.....	82%		18%											
Expenses.....	\$4,698 30		\$1,031 34											
	4,385 20	9,083 50	962 60	1,993 94									11,077 44	
Blood Laboratory:														
Salaries.....	60%		40%											
Expenses.....	\$1,329 50		\$886 34											
	146 19	1,475 69	97 46	983 80									2,459 49	
Department of Immunology:														
Salaries.....	4%		96%											
Expenses.....	\$219 37		\$5,265 00											
	20 87	240 24	500 83	5,765 83									6,006 07	
Department of Physical Therapeutics:														
Salaries.....	19%		81%											
Expenses.....	\$4,250 01		\$18,118 49											
	526 61	4,776 62	2,245 01	20,363 50									25,140 12	
Department of Oral Surgery:														
Salaries.....	32%		68%											
Expenses.....	\$474 29		\$1,007 88											
	171 12	645 41	363 62	1,371 50									2,016 91	
Department of Social Service:														
Salaries.....	51½%		48½%											
Expenses.....	\$12,712 67		\$11,972 13											
	1,103 17	13,815 84	1,038 90	13,011 03									26,826 87	
Settlement Account:														
Salaries.....	100%													
Expenses.....	\$1,579 35													
	784 75	2,364 10											2,364 10	
DEPARTMENT EXPENSES.														920,939 46
Ambulance:														
Salaries.....	\$31,782 07				\$7,203 77		\$7,142 51		\$796 87					
Expenses.....	10,386 17	42,168 24			617 85	7,821 62	182 62	7,325 13	91 46	888 33			\$58,203 32	
Training School:														
Salaries.....	\$14,577 58		\$323 48		\$190 28		\$133 20							
Expenses.....	10,565 85	25,143 43	107 82	431 30	53 91	244 19	53 90	187 10					26,006 02	
Housekeeping:														
Salaries.....	\$151,337 48		\$19,393 84		\$6,165 24		\$2,527 60		\$2,366 78					
Expenses.....	16,518 08	167,855 56	470 39	19,864 23	345 33	6,510 57	64 60	2,592 20	31 06	2,397 84			199,220 40	
Equipment:														
Expenses.....		80,006 99		3,644 30		2,127 08		530 28		567 55			86,876 20	
Steward's Department:														
Salaries.....	\$645,254 19		\$371 65		\$619 42		\$247 77		\$247 77					
Expenses.....	10,530 10	655,784 29		371 65	17,547 51	18,166 93	4,052 38	4,300 15	4,901 91	5,149 68			683,772 70	
Kitchen and Dining Room:														
Salaries.....		141,253 37				3,336 01		2,031 08		1,054 37			147,674 83	
Laundry:														
Salaries.....	\$98,487 92		\$1,023 45		\$5,609 84		\$2,677 51		\$1,846 67					
Expenses.....	22,232 88	120,720 80	124 78	1,148 23	228 78	5,838 62	102 09	2,779 60	23 69	1,870 36			132,357 61	
Heat, Light and Power:														
Salaries.....	\$61,633 90		\$5,041 21		\$6,893 36		\$6,684 46		\$502 03		\$613 81			
Expenses.....	90,468 94	152,102 84	8,287 23	13,328 44	3,548 51	10,441 87	1,278 03	7,962 49	2,593 09	3,095 12	613 81		187,544 57	
BUILDINGS AND GROUNDS.														
Buildings:														
Salaries.....	\$59,840 95		\$2,409 51		\$531 00		\$195 00		\$277 50		\$3,599 46			
Expenses.....	64,315 33	124,156 28	1,054 84	3,464 35	1,778 15	2,309 15	852 24	1,047 24	570 95	848 45	7,879 90		\$139,705 37	
Grounds:														
Salaries.....	\$11,034 58								\$437 72		\$1,199 82			
Expenses.....	3,262 11	14,296 69			\$27 75	27 75			252 87	690 59	1,199 82		16,214 85	
Miscellaneous:														
Salaries.....	\$12,750 86													
Expenses.....	19,786 22	32,537 08	\$129 86	129 86	\$747 09	747 09	\$345 35	345 35	\$231 97	231 97			\$33,991 35	33,991 35
Totals.....		\$2,516,787 52		\$214,476 23		\$91,072 52		\$45,174 73		\$21,050 04		\$9,801 11		\$2,898,362 15
Deduct board of employees.....		17,233 08												17,233 08
Add board of employees.....				13,139 87		1,746 78		1,512 14		834 29				\$2,915,695 23
Total operating expenses.....		\$2,499,564 44		\$227,616 10		\$92,819 30		\$46,686 87		\$21,884 33		\$9,801 11		\$2,898,362 15
Deduct for permanent improvements and extraordinary expenditures.....		18,407 99				482 27				800 00		1,698 00		21,388 26
Net total operating expenditures.....		\$2,481,146 45		\$227,616 10		\$92,337 03		\$46,686 87		\$21,084 33		\$8,103 11		\$2,876,973 89
Deduct difference in stock on hand more than January 1, 1930.....		5,383 00		1,239 00				224 00						6,846 00
Add difference in stock on hand less than January 1, 1930.....														\$2,870,127 89
Amount properly chargeable to maintenance.....		\$2,475,763 45		\$226,377 10		\$92,981 03		\$46,462 87		\$21,379 33		\$8,114 11		\$2,871,077 89
Total patients day's treatment.....	447,219				3,256	579			5,582					
Cost per day per ward patient.....		5 54			5 54			5 54		3 83				
Total visits of out-patients.....			355,371		26,421	32,914								
Cost per day per out-patient.....				64	2 84	1 31								

Table No. 3.

EXPENDITURES, CLASSIFIED, IN ACCORDANCE WITH  
SEGREGATED BUDGET FOR THE YEAR 1930.

GROUP AND ITEM.	ALL DEPARTMENTS.	
	1930.	
A. PERSONAL SERVICE.....		\$1,537,189 03
Permanent employees.....	\$1,449,805 07	
Temporary employees.....	73,729 66	
Unassigned.....	13,654 30	
B. SERVICE OTHER THAN PERSONAL.....		133,200 51
Printing and binding.....	\$1,984 33	
Advertising and posting.....	113 50	
Transportation of persons.....	1,381 25	
Cartage and freight.....	505 54	
Light, heat and power.....	7,612 90	
Premium on surety bond.....	96 00	
Communication.....	12,733 14	
Motor vehicle repairs.....	3,793 72	
Motorless vehicle repairs.....	2,024 75	
Care of persons.....	489 11	
Cleaning.....	32 19	
Removal of snow.....	1,693 25	
Expert and architect.....	860 04	
Fees, service of venires, etc.....	150 00	
General plant repairs.....	99,730 79	
C. EQUIPMENT.....		154,298 41
Machinery.....	\$101 60	
Electrical.....	2,710 93	
Motor vehicles.....	4,207 55	
Motorless vehicles.....	1,006 41	
Furniture and fittings.....	42,500 47	
Office.....	1,833 25	
Library.....	1,113 18	
Medical, surgical, laboratory.....	73,540 20	
Tools and instruments.....	9,078 00	
Wearing apparel.....	18,206 82	
Carried forward.....		\$1,824,687 95

# HOSPITAL DEPARTMENT.

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EXPENDITURES, CLASSIFIED, IN ACCORDANCE WITH SEGREGATED  
BUDGET FOR THE YEAR 1930.— *Concluded.*

GROUP AND ITEM.	ALL DEPARTMENTS.	
	1930.	
<i>Brought forward</i> .....		\$1,824,687 95
D. SUPPLIES.....		1,023,682 64
Office.....	\$28,913 84	
Food and ice.....	671,762 11	
Fuel.....	106,253 56	
Forage and animals.....	958 41	
Medical, surgical, laboratory.....	180,434 65	
Laundry, cleaning and toilet.....	19,646 79	
Educational and recreational.....	941 22	
Agricultural.....	36 16	
Motor vehicles.....	2,251 94	
Chemicals and disinfectants.....	500 84	
General plant.....	11,983 12	
E. MATERIALS.....		37,240 70
Buildings.....	\$23,452 21	
Machinery.....	3,742 05	
Electrical.....	7,315 36	
General plant.....	2,731 08	
F. SPECIAL ITEMS.....		12,750 86
Pensions and annuities.....	\$2,789 63	
Workingmen's compensation.....	9,961 23	
Total expenditures.....		\$2,898,362 15

Table No. 4.

## DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930, INCLUSIVE.

ARTICLES.	Quantity.	Average Price.	Cost.
THE MAIN HOSPITAL, SOUTH DEPARTMENT, HAYMARKET SQUARE RELIEF STATION, EAST BOSTON RELIEF STATION, CONVALESCENT HOME AND WEST DEPARTMENT.			
Beef and veal.....	394,004 lbs.	\$0.314 per lb.	\$123,651 26
Mutton and lamb.....	157,243 "	.321 "	50,437 36
Poultry.....	148,889 "	.374 "	55,673 42
Pork and hams.....	250,237 "	.297 "	74,389 11
Fish.....			14,222 90
Lard.....	12,752 lbs.	.152 per lb.	1,937 43
Milk.....	788,308 qts.	.111 per qt.	87,854 85
Butter.....	107,763 lbs.	.359 per lb.	38,740 75
Cheese.....	6,407 "	.324 "	2,078 98
Eggs.....	105,491 "	.44 per doz.	46,447 15
Vegetables, fresh.....			49,809 12
Vegetables, canned.....			10,358 17
Fruit, fresh.....			33,842 62
Fruit, canned.....			21,104 61
Flour.....	1,199 bbls.	5.578 per bbl.	6,687.61
Graham flour.....	22½ "	5.673 "	126 23
Oatmeal.....	41 "	5.728 "	234 83
Cornstarch and farina.....	5,184 lbs.	.069 per lb.	357 32
Rice.....	8,000 "	.057 "	454 66
Other cereals.....			6,626 02
Groceries.....			11,867 98
Coffee.....	30,735 lbs.	.279 per lb.	8,570 23
Tea.....	8,455 "	.473 "	4,002 89
Chocolate and cocoa.....	2,622 "	.138 "	362 91
Sugar.....	183,388 "	.047 "	8,655 89
Molasses and syrup.....	618½ "	.577 per gal.	356 99
<i>General Supplies.</i>		<i>Cost.</i>	
Printing.....		\$8,708 69	
Stationery.....		6,626 96	
<i>Carried forward.....</i>		\$15,335 65	\$658,851 29

## HOSPITAL DEPARTMENT.

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DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Totals.
<i>Brought forward</i> .....	\$15,335 65	\$658,851 29
<i>General Supplies.— Continued.</i>		
Postage.....	908 85	
Advertising proposals, etc.....	113 50	
Telephone rentals.....	9,117 77	
Telephone, telegraph and messenger service.....	1,338 50	
Vose House and Drown House:		
General supplies..... \$3,281 05		
Medical supplies..... 9 45		
Buildings..... 6,227 30		
Wages, housecleaning..... 3,770 89		
	13,288 69	
Training School for Nurses:		
General supplies.....	1,155 86	
Garage and ambulance:		
Expenses..... \$8,635 63		
Fuel oil, 12,697.35 gallons at \$0.033 per gal. 425 08		
	9,060 71	
Garage supplies.....	218 38	
Gasoline.....	1,999 01	
Soap and cleansing stuffs.....	16,065 57	
Dry goods.....	6,847 62	
Furniture.....	10,974 92	
Furnishings.....	43,834 15	
Fixtures.....	9,237 62	
Bedsteads.....	1,533 95	
Mattresses.....	1,541 25	
Bedding.....	9,262 39	
Laundry Supplies:		
Expenses..... \$13,172 13		
Fuel oil, 281,246.43 gallons at \$0.033 per gal. 9,415 31		
	22,587 44	
Gas, 4,156,900 cubic feet at \$1.126 per 1,000 cubic feet...	4,680 90	
Electric light purchased.....	2,023 00	
Electric light system.....	8,867 17	
Electrical appliances.....	2,598 54	
Kerosene, matches and candles.....	128 61	
Ice, 2,132,233 tons at \$6.052 per ton.....	12,904 70	
<i>Carried forward</i> .....	\$205,624 75	\$658,851 29

DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Totals.
<i>Brought forward</i> .....	\$205,624 75	\$658,851 29
<i>General Supplies.— Concluded.</i>		
Transportation and express.....	869 50	
Cartage and freight.....	647 95	
Insurance.....	96 00	
Clothing for patients.....	11,197 76	
Uniforms, caps, etc.....	4,279 27	
Annual reports.....	1,260 28	
Medical library.....	1,624 25	
Clinical records:		
Expense..... \$3,966 09		
Salaries..... 14,374 33		
	18,340 42	
Housecleaning:		
Soap..... \$490 95		
Brushes, etc..... 338 03		
Uniforms, caps, etc..... 64 52		
	893 50	
Incidentals not otherwise classified.....	1,135 62	
		245,969 30
<i>Medical Supplies.</i>		
Surgical appliances.....	\$21,379 57	
Splints and crutches.....	1,873 37	
Surgical instruments.....	27,618 66	
X-ray apparatus.....	96 30	
X-ray supplies.....	1,645 18	
Druggists' sundries.....	3,824 10	
Laboratory ware.....	3,541 20	
Surgical dressings.....	5,081 53	
Bandage and compress materials.....	5,476 12	
Gauze.....	31,330 19	
Absorbent cotton.....	2,466 63	
Medicinal gases.....	4,880 58	
Sulphuric ether.....	3,424 40	
Medicine and drugs.....	58,184 40	
Flaxseed meal.....	1,691 19	
Alcohol.....	4,343 67	
Radium.....	623 80	
<i>Carried forward</i> .....	\$177,480 89	\$904,820 59

# HOSPITAL DEPARTMENT.

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DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward.....</i>		\$177,480 89	\$904,820 59
<i>Medical Supplies.— Concluded.</i>			
Liquors.....		1,170 08	
Malt liquors and mineral waters.....		2,402 34	
Care of patients.....		489 11	181,542 42
<i>Fuel.</i>			
Coal, 595 $\frac{1188}{1000}$ tons at \$7.84 per ton.....		\$4,671 19	
Oil, 2,245,527.22 gallons at \$0.033 per gallon.....		75,173 97	
Charcoal.....		307 00	
Wood.....		29 00	
Coke.....		23 00	80,204 16
<i>Salaries and Labor.</i>			
Salaries and wages.....		\$7,600 00	
Pay rolls.....		1,174,998 83	
Wages, house cleaners.....		37,700 15	
Pensions.....		2,789 63	
Injured employees.....		9,961 23	1,233,049 84
<i>Buildings.</i>			
General repairs.....		\$39,523 45	
Boilers and heating apparatus.....		15,853 01	
Painting.....		5,860 05	
Plumbing.....		3,735 11	
Drains and sewers.....		821 22	
Refrigerating plant.....		2,427 13	
Walls and fences.....		3,577 14	71,797 11
<i>Grounds.</i>			
Care of grounds.....			3,542 73
			\$2,474,956 85
Deduct for board of employees: Out-Patient Department.....			13,139 87
Total expenditures for maintaining Main Departments for year ending December 31, 1930.....			\$2,461,816 98
<b>OUT-PATIENT DEPARTMENT.</b>			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$3,120 95		
Telephone rentals.....	750 59		
<i>Carried forward.....</i>	\$3,871 54		\$2,461,816 98

DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....	\$3,871 54	.....	\$2,461,816 98
OUT-PATIENT DEPARTMENT.— <i>Continued.</i>			
<i>General Supplies.— Concluded.</i>			
Account Training School for Nurses:			
Training School for Nurses, Vose House, Drown House:			
General supplies..... \$44 92			
Buildings..... 62 90			
Wages, house cleaning..... 38 09			
	145 91		
Soap and cleansing stuffs.....	160 91		
Dry goods, uniforms and clothing for patients.....	135 74		
Furniture, furnishings and fixtures.....	3,244 03		
Mattresses and bedding.....	309 03		
Laundry supplies.....	124 78		
Gas, 39,200 cubic feet at \$1.00 per 1,000 cubic feet.....	39 20		
Electric light system.....	130 39		
Electrical appliances.....	19 65		
Kerosene, matches and candles.....	1 59		
Transportation and express.....	11 36		
Clinical records and cataloguing:			
Printing..... \$161 70			
Salaries..... 27,257 81			
	27,419 51		
House cleaning: Soap, \$163.42, brushes, etc., \$146.06.....	309 48		
Incidentals not otherwise classified.....	74 00		
		\$35,997 12	
<i>Medical Supplies.</i>			
Surgical instruments and appliances.....	\$3,036 27		
Splints and crutches, drug sundries and laboratory ware.....	584 81		
Dressings, gauze, bandage and absorbent cotton.....	2,765 45		
Medicinal gases, ether, alcohol, drugs.....	6,517 05		
		12,903 58	
<i>Fuel.</i>			
Oil, 241,854.34 gallons at \$0.033 per gallon..	.....	8,096 40	
<i>Carried forward</i> .....	.....	\$56,997 10	\$2,461,816 98

# HOSPITAL DEPARTMENT.

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DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....		\$56,997 10	\$2,461,816 98
OUT-PATIENT DEPARTMENT.— <i>Concluded.</i>			
<i>Salaries and Labor.</i>			
Salaries and wages.....	\$160 00		
Pay rolls.....	62,491 79		
Wages, house cleaning.....	7,056 31	69,708 10	
<i>Buildings.</i>			
Building repairs, heating apparatus, painting and plumbing.....		1,054 84	
		\$127,760 04	
Add for board of Out-Patient employees. ....		13,139 87	140,899 91
PATHOLOGICAL LABORATORY.			
<i>General Supplies.</i>			
Printing and stationery.....	\$714 79		
Telephone rentals.....	68 23		
Soap and cleansing stuffs.....	31 87		
Dry goods, uniforms and caps.....	105 79		
Bedding.....	8 05		
Furnishings and fixtures.....	382 71		
Laundry.....	34 03		
Gas, 253,900 cubic feet at \$1 per 1,000 cubic feet.....	253 90		
Electric light system.....	8 32		
Electrical appliances.....	14 61		
Kerosene, matches and candles.....	2 65		
Transportation, express, cartage, etc.....	9 40		
Hay, grain and straw.....	683 69		
House cleaning: Soap, \$2.81; brushes, etc., \$2.06; uniforms, \$0.83.....	5 70	\$2,323 74	
<i>Medical Supplies.</i>			
Surgical instruments, appliances and laboratory ware.....	\$4,774 92		
Micro-photographic supplies.....	89 14		
Bandage and absorbent cotton.....	117 55		
Medicinal gases, ether, alcohol, chemicals, serum.....	1,778 78		
Animals.....	70 34	6,830 73	
<i>Carried forward</i> .....		\$9,154 47	\$2,602,716 89

DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....		\$9,154 47	\$2,602,716 89
PATHOLOGICAL LABORATORY.— <i>Concluded.</i>			
<i>Fuel.</i>			
Oil, 90,695.38 gallons at \$0.033 per gallon ..		3,036 15	
<i>Salaries and Labor.</i>			
Salaries and wages .....	\$80 00		
Pay rolls .....	37,488 38		
Wages, house cleaning .....	411 12	37,979 50	
<i>Buildings.</i>			
Building repairs, heating apparatus and plumbing .....		1,009 68	51,179 80
THORNDIKE MEMORIAL LABORATORY.			
<i>General Supplies.</i>			
Printing, stationery and postage .....	\$678 18		
Telephone rentals .....	136 47		
Soap and cleansing stuffs .....	16 16		
Uniforms and caps .....	205 40		
Furniture, furnishings and fixtures .....	1,056 22		
Mattresses and bedding .....	34 41		
Laundry .....	79 40		
Gas, 415,900 cubic feet at \$1 per 1,000 cubic feet .....	415 90		
Electric light system .....	28 98		
Electrical appliances .....	8 96		
Kerosene, matches and candles .....	2 01		
Cartage and freight .....	27 16		
Hay, grain and straw .....	284 02		
House cleaning: Soap, \$4.35; brushes, etc., \$3.17; uniforms, \$1.29 .....	8 81		
Incidentals not otherwise classified .....	876 06	\$3,858 14	
<i>Medical Supplies.</i>			
Surgical instruments, appliances and laboratory ware .....	\$8,457 40		
Micro-photographic supplies .....	695 52		
Gauze and absorbent cotton .....	88 41		
Medicinal gases, chemicals, ether and alcohol .....	1,866 14		
Animals .....	1,834 06	12,941 53	
<i>Carried forward</i> .....		\$16,799 67	\$2,653,896 69

DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....		\$16,799 67	\$2,653,896 69
THORNDIKE MEMORIAL LABORATORY. — <i>Concluded.</i>			
<i>Fuel.</i>			
Oil, 63,791.43 gallons at \$0.033 per gallon.....		2,106 52	
<i>Salaries and Labor.</i>			
Salaries and wages.....	\$80 00		
Pay rolls.....	62,102 66		
Wages, house cleaning.....	606 16	62,788 82	
<i>Buildings.</i>			
Building repairs, heating apparatus and plumbing.....		1,089 03	82,784 04
X-RAY AND PHOTOGRAPHIC DEPARTMENT.			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$1,285 46		
Telephone rentals.....	136 47		
Soap and cleansing stuffs.....	13 08		
Dry goods, clothing for patients and uni- forms.....	114 33		
Furniture and furnishings.....	1,090 00		
Mattresses and bedding.....	70 47		
Laundry.....	22 69		
Electric power purchased.....	200 00		
Electric light system.....	44 16		
Electrical appliances.....	63 91		
Cartage and freight.....	20 92		
House cleaning: Soap, \$2.56; brushes, etc., \$1.86; uniforms, etc., \$0.76.....	5 18	\$3,066 67	
<i>Medical Supplies.</i>			
Instruments and appliances.....	\$466 09		
X-ray and photographic apparatus.....	9,391 90		
X-ray and photographic supplies.....	29,139 64		
Dressings, gauze, absorbent cotton and bandage material.....	36 91		
Chemicals, sulphuric ether and alcohol.....	2,211 34	41,245 88	
<i>Fuel.</i>			
Oil, 87,367.48 gallons at \$0.033 per gallon.....		2,953 74	
<i>Carried forward</i> .....		\$47,266 29	\$2,736,680 73

DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE, *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....		\$47,266 29	\$2,736,680 73
X-RAY AND PHOTOGRAPHIC DEPARTMENT. — <i>Concluded.</i>			
<i>Salaries and Labor.</i>			
Salaries and wages.....	\$80 00		
Pay rolls.....	37,043 60		
Wages, house cleaning.....	304 24	37,427 84	
<i>Buildings.</i>			
Building repairs, heating apparatus and plumbing.....		1,096 29	85,790 42
DEPARTMENT OF PHYSICAL THERAPEUTICS.			
<i>General Supplies.</i>			
Printing and stationery.....	\$109 23		
Telephone rentals.....	34 12		
Soap and cleansing stuffs.....	9 58		
Dry goods and clothing for patients.....	129 47		
Laundry.....	34 03		
Furniture and furnishings.....	196 75		
Electrical appliances.....	110 65		
House cleaning: Soap, \$3.16; brushes, etc., \$4.38.....	7 54	\$631 37	
<i>Medical Supplies.</i>			
Instruments, appliances and splints and crutches.....	\$980 74		
Dressings, bandage, gauze and absorbent cotton.....	1,077 34		
Chemicals, ether and alcohol.....	82 17	2,140 25	
<i>Salaries and Labor.</i>			
Pay rolls.....	\$22,155 14		
Wages, house cleaning.....	213 36	22,368 50	25,140 12
DEPARTMENT OF IMMUNOLOGY.			
<i>General Supplies.</i>			
Printing and stationery.....	\$15 74		
Soap and cleansing stuffs.....	2 33		
Furniture and furnishings.....	33 93		
Kerosene, matches and candles.....	15		
House cleaning: Soap, \$2.20; brushes, etc., \$1.48.....	3 68	\$55 83	
<i>Carried forward</i> .....		\$55 83	\$2,847,611 27

## HOSPITAL DEPARTMENT.

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DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....		\$55 83	\$2,487,611 27
DEPARTMENT OF IMMUNOLOGY.— <i>Concluded.</i>			
<i>Medical Supplies.</i>			
Surgical instruments, appliances and laboratory ware.....	\$212 69		
Surgical dressings, gauze and absorbent cotton.....	44 58		
Chemicals, alcohol and serum.....	208 60	465 87	
<i>Salaries and Labor.</i>			
Pay rolls.....	\$5,388 25		
Wages, house cleaning.....	96 12	5,484 37	6,006 07
CLINICAL LABORATORY.			
<i>General Supplies.</i>			
Telephone rentals.....	\$34 12		
Dry goods, uniforms, etc.....	166 10		
Furnishings.....	1 20		
Bedding.....	24 93		
Cartage and freight.....	66	\$227 01	
<i>Medical Supplies.</i>			
Surgical instruments, appliances, laboratory ware.....	\$284 81		
Gauze.....	15 46		
Chemicals and sulphuric ether.....	4,820 52	5,120 79	
<i>Salaries and Labor.</i>			
Pay rolls.....		5,729 64	11,077 44
BLOOD LABORATORY.			
<i>General Supplies.</i>			
Dry goods.....	\$4 00		
House cleaning: Soap, \$1.02; brushes, etc., \$1.05.....	2 07	\$6 07	
<i>Medical Supplies.</i>			
Surgical instruments, appliances and laboratory ware.....	\$197 45		
Absorbent cotton and gauze.....	26 84		
Chemicals and alcohol.....	13 29	237 58	
<i>Carried forward</i> .....		\$243 65	\$2,864,694 78

DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....		\$243 65	\$2,864,694 78
<b>BLOOD LABORATORY.— <i>Concluded.</i></b>			
<i>Salaries and Labor.</i>			
Pay rolls.....	\$2,064 10		
House cleaning.....	151 74	2,215 84	2,459 49
<b>DEPARTMENT OF ORAL SURGERY.</b>			
<i>General Supplies.</i>			
Furnishings.....	\$14 40		
House cleaning: Soap, \$0.26; brushes, etc., \$0.26.....	52	\$14 92	
<i>Medical Supplies.</i>			
Surgical instruments, appliances and appa- ratus.....	\$491 14		
Medicine and drugs, ether and alcohol.....	28 68	519 82	
<i>Salaries and Labor.</i>			
Pay rolls.....	\$1,448 33		
Wages, house cleaning.....	33 84	1,482 17	2,016 91
<b>DEPARTMENT OF SOCIAL WORK.</b>			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$526 77		
Furniture and furnishings.....	153 01		
Telephone rentals.....	818 82		
Telephone, telegraph and messenger service, Transportation.....	146 47 497 00	\$2,142 07	
<i>Salaries and Labor.</i>			
Pay rolls.....		24,684 80	26,826 87
<b>SETTLEMENT ACCOUNT.</b>			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$569 17		
Telephone rentals.....	153 53		
Furniture and furnishings.....	62 05	\$784 75	
<i>Salaries and Labor.</i>			
Pay rolls.....		1,579 35	2,364 10
Total disbursements.....			\$2,898,362 15
<i>Carried forward</i> .....			\$2,898,362 15

DISBURSEMENTS FROM JANUARY 1, 1930, TO DECEMBER 31, 1930,  
INCLUSIVE.— *Continued.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i> .....			\$2,898,362 15
STOCK ON HAND JANUARY 1, 1930.			
<i>All Departments.</i>			
General supplies.....		\$99,850 00	
Fuel.....		3,434 00	
Medical supplies.....		26,292 00	
			129,576 00
Total expenditures for all purposes.....			\$3,027,938 15
DEDUCT.			
STOCK ON HAND JANUARY 1, 1931.			
General supplies.....		\$104,806 00	
Fuel.....		2,085 00	
Medical supplies.....		28,581 00	
			135,472 00
Total maintenance expenses.....			\$2,892,466 15
DEDUCT REVENUE.			
Income from paying patients:			
Collected by hospital.....	\$182,971 40		
Collected by City Collector for contagious cases.....	18,782 37		
		\$201,753 77	
Revenue on account of maintenance:			
Interest on trust funds.....		2,580 05	
Sundry revenue:			
Sale of bones, trimmings, bread crumbs, and old material.....		2,480 73	
Commission on automatic telephones.....		535 98	
Birth fees.....		479 00	
Interest on bank deposit.....		93 93	
Rent of booth — West Department.....		100 00	
Refund on customs.....		64 07	
			208,087 53
Net cost to the City for maintaining all departments from January 1, 1930, to December 31, 1930, inclusive.....			\$2,684,378 62

Table No. 5.

COMPARISON OF THE CENSUS AND EXPENDITURES AT THE BOSTON CITY HOSPITAL FOR THE YEARS ENDING DECEMBER 31, 1926, 1927, 1928, 1929, AND 1930.

POPULATION.	ALL DEPARTMENTS EXCEPT SANATORIUM DIVISION.				
	1926.	1927.	1928.	1929.	1930.
Number of patients at beginning of year. ....	905	931	1,065	1,003	1,162
Number admitted during year. ....	24,855	27,088	27,249	28,715	32,476
Number discharged during year, including deaths. ....	24,818	26,954	27,321	28,556	32,364
Number remaining at end of year. ....	942	1,065	993	1,162	1,274
DAILY AVERAGE OF DAYS' BOARD GIVEN.					
Patients. ....	953	1,087.2	1,127.3	1,147.3	1,251
Officers and employees. ....	815.8	885.3	948.3	1,079	1,223.2
House officers and special nurses. ....	130.9	144.8	149.1	145.1	158.6
Totals. ....	1,899.7	2,117.3	2,224.7	2,371.4	2,632.8
EXPENDITURES.					
Ordinary expenditures:					
Personal service. ....	\$996,022 51	\$1,083,918 94	\$1,149,994 68	\$1,338,195 87	\$1,537,189 03
Service other than personal. ....	69,627 23	69,640 90	82,380 63	107,404 52	114,952 55
Equipment. ....	112,783 49	107,373 18	118,256 92	129,392 52	152,033 11
Supplies. ....	668,096 85	712,680 09	784,783 84	937,519 22	1,023,682 64
Materials. ....	30,831 94	29,623 00	30,676 61	32,379 13	36,365 70
Special items. ....	6,174 45	7,597 70	10,178 37	10,645 97	12,750 86
Incidental expenditures. ....	300 00				
Extraordinary expenditures (permanent improvements, etc.):					
Service other than personal. ....	17,029 94	31,141 35	8,824 46	28,152 17	18,247 96
Equipment. ....		6,475 00	533 00	1,185 25	2,265 30
Supplies. ....				3 25	
Materials. ....				339 01	875 00
Special items. ....		625 00			
Incidental expenditures. ....				27,152 53	
Totals. ....	\$1,900,866 41	\$2,049,075 16	\$2,185,628 51	\$2,612,369 44	\$2,898,362 15

## PER CAPITA COSTS YEAR 1930.

	Per Visit.	Per Day.	Per Week.
Hospital proper:			
Per ward patient (after deducting cost of permanent improvements and extraordinary expenditures).....		\$5 64	\$39 46
Per person, for uncooked food supplies.....		68	4 79
Per out-patient, per visit.....	\$0 64		
South Department:			
Per patient.....		4 96	34 69
Per person, for uncooked food supplies.....		68	4 78
Hospital proper and South Department, together:			
Per ward patient (after deducting cost of permanent improvements and extraordinary expenditures).....		5 54	38 75
Haymarket Square Relief Station:			
Per ward patient.....		5 54	38 75
Per out-patient, per visit.....	2 84		
East Boston Relief Station:			
Per ward patient.....		5 54	38 75
Per out-patient, per visit.....	1 31		
Convalescent Home:			
Per patient.....		3 83	26 79
All Departments except Sanatorium Division:			
Per person, for uncooked food supplies.....		69	4 80

Table No. 6.  
REVENUE FROM ALL SOURCES RECEIVED DURING THE YEAR 1930.

	Hospital Proper.	South Depart- ment.	Haymarket Square Relief Station.	East Boston Relief Station.	West Depart- ment.	All Depart- ments.	Totals.	Grand Totals.
Revenue, Account of Maintenance:								
Interest on Trust Funds.....	\$2,580 05							\$2,580 05
Sundry Revenue:								
Income from paying patients collected by Hospital:								
For ward patients.....	144,683 06	\$4,758 07	\$2,397 38	\$185 49		\$4,311 03	\$156,335 03	
For out-patients.....	23,931 37		1,620 00	178 00		907 00	26,636 37	
Received by City Collector for contagious cases.....		18,782 37					18,782 37	
Sale of bones and trimmings.....	2,025 48	279 74	27 93					201,753 77
Sale of bread crumbs.....	78 48							2,333 15
Sale of old material.....	69 10							78 48
Commission on automatic telephones.....	457 81	46 00	32 17					69 10
Birth fees.....	479 00							535 98
Rent of booth.....					\$100 00			479 00
Interest on bank deposit.....	93 93							100 00
Refund on customs.....	64 07							93 93
Totals.....	\$174,462 35	\$23,866 18	\$4,077 48	\$363 49	\$100 00	\$5,218 03		\$208,087 53

The tables of disbursements in this report show the expenditures of the Hospital Department for the year 1930. Tables No. 1 and No. 2 show the disbursements in various subdivisions with per capita costs. Table No. 2 shows the Hospital proper combined with South Department to form the main Hospital. Table No. 3 shows the expenditures according to the budget classification. Table No. 4 shows the detailed disbursements in various subdivisions. Table No. 5 is a comparison of the census and expenditures for the past five years. Table No. 6 is a statement of the revenue received from all sources during the year.

The total expenditures for the fiscal year for Hospital Department, in the various branches, excepting the Sanatorium Division, have been \$2,898,362.15. The disbursements have been made as follows:

	All Departments, except Sanatorium Division.
For personal service . . . . .	\$1,537,189 03
Service other than personal . . . . .	133,200 51
Equipment . . . . .	154,298 41
Supplies . . . . .	1,023,682 64
Materials . . . . .	37,240 70
Special items . . . . .	12,750 86
Total . . . . .	<u>\$2,898,362 15</u>

The Hospital proper has eleven subdivisions, the Hospital (wards) proper, Out-Patient Department, Pathological Laboratory, Thorndike Memorial, X-Ray Department, Department of Physical Therapeutics, Department of Immunology, Blood Laboratory, Clinical Laboratory, Department of Oral Surgery, Department of Social Work.

The expenditures for the South Department for infectious diseases, the Haymarket Square Relief Station, the East Boston Relief Station, the Convalescent Home and the West Department are kept in separate tables.

The average weekly expenditure per ward patient in the Hospital proper was \$39.46, at South Department, \$34.69; at the main Hospital (Hospital proper and South Department combined), \$38.75. At the Convalescent Home the average weekly expenditure per patient was \$26.79.

The expenditure per visit per out-patient at the Hospital proper was 64 cents; at the Haymarket Square Relief Station, \$2.84; at the East Boston Relief Station, \$1.31.

The expenditure per person for uncooked food supplies in all the Hospital Departments, excepting the Sanatorium Division, was \$4.80 per week, or 69 cents per day.

The total expenditures of the Hospital Department, excepting the Sanatorium Division, have been \$2,898,362.15, but the net cost to the city for maintaining it was only \$2,684,378.62.

The maximum number of patients in the Hospital proper on any one day was 1,167 as against 1,166 in the previous year. The minimum number was 944 in comparison with 813 for the previous year. The daily average during the year was 1,044.1 and the average length of stay was 13.3 days.

There have been treated in the various out-patient departments at the Hospital proper 98,154 patients. Other statistics may be found elsewhere, including the visits of out-patients, rate of mortality, work of ambulances, census of days' board for all persons, the nativity of patients admitted, and physical condition of patients when discharged.

The total number of deaths during the year was 1,927. This includes only the statistics of the Hospital proper.

Of the deaths, there occurred within

48 hours of admission . . . . .	661 or 2.3 per cent
Other deaths . . . . .	1,266 or 4.4 per cent
Total . . . . .	1,927 or 6.7 per cent

the rate of mortality for the year 1930.

This percentage of deaths is for the total number of patients treated in the Hospital. The deaths occurring within forty-eight hours of admission, 661, were 34 per cent of the whole number of deaths (1,927).

During the past year 28,665 patients were treated in the wards of the Hospital proper, 98,154 as out-patients; 357 at the Convalescent Home; 2,125 at the South Department; at the Haymarket Square Relief Station 2,280 were treated in the wards and 26,421 as out-patients, and at the East Boston Relief Station, 211 were treated in the wards and 12,546 as out-patients, making a total of 170,402 who have received the

benefits of the Hospital in all departments. The 357 Convalescent Home patients are not included in the total treated because they are transfers from the other Hospital departments and have already been counted.

During the past year 28,053 persons applied for admission at the Hospital proper. Of this number 27,721 were admitted and 332 rejected. This number rejected was 1 per cent of all persons applying and the causes of rejection appear in the table of applicants not admitted on page 105.

There were 279 self-rejected or deferred. Of these, 60 were admitted within three days and 80 were admitted later. There were 175 denied admission because they had a state settlement, but of these 16 were admitted within three days and 20 were admitted later. Fifty-two were refused admission because they did not reside within the city limits, but 10 of these were admitted within three days and 12 later. Twenty-eight were referred to other public institutions on account of the nature of their diseases, but of these 4 were admitted later.

#### HAYMARKET SQUARE RELIEF STATION.

The following are the principal statistics of the Haymarket Square Relief Station for the year 1930:

Number of patients at Haymarket Square Relief Station, December 31, 1929 . . . . .	8
Admitted from January 1, 1930, to December 31, 1930 . . . . .	2,272
Treated during the year . . . . .	2,280
Discharged during the year . . . . .	2,156
Died during year . . . . .	119
Total discharges and deaths . . . . .	2,275
Number of patients remaining in Haymarket Square Relief Station, December 31, 1930 . . . . .	5
Number of out-patients treated during the year 1930 . . . . .	26,421
Largest number of out-patients treated in any one day, . . . . .	144
Largest number of ward patients treated in any one day . . . . .	20
Smallest number of ward patients treated in any one day . . . . .	2
Number of surgical operations during year 1930 . . . . .	20
Number of deaths following surgical operations . . . . .	0
Number of deaths during the year 1930 . . . . .	119

Number of deaths within twenty-four hours of admission . . . . .	115
Number of days' treatment given patients in ward . . . . .	3,256
Average stay of patients in wards . . . . .	1.4
Daily average of patients in wards . . . . .	8.9
Number of Relief Station ambulance calls . . . . .	601
Number of trips to Boston City Hospital for transfers . . . . .	516
Miscellaneous ambulance trips . . . . .	4
<hr/>	
Total number of ambulance trips . . . . .	1,121
Number of admitted cases transferred to Main Hospital . . . . .	572
Number of out-patients transferred to Main Hospital . . . . .	70
<hr/>	
Total number of cases transferred to Main Hospital . . . . .	642
Number of no case trips made by ambulance . . . . .	47
Number of miles traveled by ambulance . . . . .	4,722
Number of alcoholics admitted during year . . . . .	329
Number of medical patients admitted during year . . . . .	656
Number of surgical patients admitted during year . . . . .	1,616
Number of medical out-patients treated during year . . . . .	1,087
Number of surgical out-patients treated during year . . . . .	25,334
Number of births during year . . . . .	2
Number of females admitted during year . . . . .	412
Number of males admitted during year . . . . .	1,861
Number of X-rays taken during the year . . . . .	3,003
Number of patients treated in X-Ray Department . . . . .	1,289

#### EAST BOSTON RELIEF STATION.

The following are the principal statistics for the year 1930:

Number of patients remaining in the East Boston Relief Station, January 1, 1930 . . . . .	1
Admitted during year 1930 . . . . .	210
<hr/>	
Treated during year . . . . .	211
Discharged during year . . . . .	177
Died during year . . . . .	34
<hr/>	
Total discharges and deaths . . . . .	211
Number of patients remaining in the East Boston Relief Station, January 1, 1931 . . . . .	0
Number of out-patients treated:	
Medical . . . . .	308
Surgical . . . . .	12,238
<hr/>	
	12,546

Number of visits of out-patients:		
Medical . . . . .	308	
Surgical . . . . .	32,606	
	<hr/>	32,914
Largest number of out-patients on any one day . . . . .		196
Number of surgical major operations during year . . . . .		1
Number of deaths following operation . . . . .		1
Number of deaths within twenty-four hours of admission . . . . .		34
Number of days' treatment given patients in wards . . . . .		579
Largest number of ward patients on any one day . . . . .		6
Average stay of ward patients in days . . . . .		2.7
Daily average in wards . . . . .		1.6
Number of ambulance trips:		
Transferring patients to Main Hospital . . . . .	132	
Other ambulance trips . . . . .	194	
	<hr/>	326
Patients carried in ambulances . . . . .		326
Miles run by ambulances . . . . .		1,788
Number of cases brought in by police ambulances . . . . .		323
Number of cases brought in by automobiles, etc. . . . .		368
Number of cases receiving ward treatment although not admitted . . . . .		442
Number of X-rays taken during year . . . . .		724
Number of patients receiving treatment in X-ray Service . . . . .		693

## CONVALESCENT HOME.

Number of patients remaining in Convalescent Home		
December 31, 1929 . . . . .		10
Admitted during year . . . . .		347
	<hr/>	
Treated during year . . . . .		357
Discharged during year . . . . .	349	
Died during year . . . . .	1	
	<hr/>	
Total number discharged and died . . . . .		350
Number of patients remaining December 31, 1930 . . . . .		7
Largest number of patients on any one day . . . . .		28
Smallest number of patients on any one day . . . . .		6
Daily average number of patients . . . . .		15.3
Shortest stay of any one patient in days . . . . .		1
Longest stay of any one patient in days . . . . .		307
Average length of stay in days . . . . .		15.6
Number of days' treatment given patients . . . . .		5,582

## MEDICAL LIBRARY.

Number of books in Library, January 1, 1930 . . . . .	4,851
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Number of books added to Library from January 1,  
1930, to December 31, 1930:

By donation . . . . .	29	
By binding . . . . .	170	
		199

Number of books in Library, December 31, 1930 . . . . . 5,050

There have been received during the year 119 monographs, 362 reprints, 308 Annual Hospital and Health Reports, and 1,080 periodicals.

#### CLINICAL RECORD ROOM — HOUSE RECORDS.

Number of volumes indexed and prepared for binding, 359

Cards written:

For clinical catalogue . . . . .	31,990	
For name catalogue . . . . .	27,721	
		59,711

#### TRAINING SCHOOL FOR NURSES.

The Training School for Nurses has now completed its fifty-third year. During the past year the Training School for Nurses has increased in numbers in proportion to the opening of new wards. With Wards F, G and H (which are at present closed) we have added eight medical wards. Five of these still remain to be provided with nurses.

This increase in number of nurses has taxed our housing capacity to the limit of 300 pupils, the number specified as our quota by the Training School Committee. This is the first time we have reached our quota.

Ninety-eight probationers came during the year, 30 of whom left for various reasons. One of these probationers (after three months training) died of streptococcus infection. We regret such an unfortunate event, and feel that everything possible was done for her comfort during her illness.

Counting graduates and pupils, the number of nurses in the Training School has increased by 68. Every position for a graduate Head Nurse is filled at present.

On October first, six Supervising Nurses were appointed to check up more closely on the various nursing procedures in the wards, the conduct and appearance of the pupils, and their attitude toward patients and visitors.

Miss Grace MacIntyre, a graduate of Teachers College, 1914, has been added to the office force as Fourth Assistant Superintendent of Nurses. She has charge of teaching the Supervising Nurses, and has, with them, worked out a splendid plan of better correlation of theory and practice.

This coming year we hope to advance in planning case studies for pupils; we are also planning an educational program for Head Nurses, so that they may receive thorough instruction in ward management.

The painting of the Drown House, together with the renovation of the Nurses' Home at the South Department, will add greatly to the pleasure and comfort of the pupils.

Gratitude is due to Doctor Dowling and to the Board of Trustees for their cooperation and consideration. May the coming year see added improvements in the Training School.

The changes in the nursing staff have been as follows:

Total number of nurses, January 1, 1930 . . . .	458
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During the year nurses came as follows:

Supervisors employed . . . . .	2
Graduates transferred to be supervisors . . . . .	6
Graduate transferred to be instructor . . . . .	1
Graduate nurses employed first time . . . . .	8
Graduates re-employed . . . . .	24
Graduates retained . . . . .	21
Pupil re-instated . . . . .	1
Probationers came . . . . .	98
Male graduates employed . . . . .	7
Male graduates re-employed . . . . .	2
Graduate floor nurses employed . . . . .	25

Affiliated pupils as follows:

Portsmouth Hospital . . . . .	10
Lawrence General Hospital . . . . .	30
Bath City Hospital . . . . .	4
Long Island Hospital . . . . .	10
Charlesgate Hospital . . . . .	9
Massachusetts General Hospital . . . . .	1
St. Margaret's Hospital . . . . .	17
Cambridge Hospital . . . . .	44
Cambridge City Hospital . . . . .	9
Chelsea Memorial Hospital . . . . .	9

<i>Carried forward</i> . . . . .	338	458
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<i>Brought forward</i> . . . . .	338	458
Worcester Memorial Hospital . . . . .	14	
Quincy City Hospital . . . . .	22	
New England Hospital . . . . .	13	
Leonard Morse Hospital . . . . .	9	
Paine Hospital . . . . .	4	
Franklin County Hospital . . . . .	15	
Emerson Hospital . . . . .	7	
Grafton State Hospital . . . . .	5	
Worcester State Hospital . . . . .	11	
Taunton State Hospital . . . . .	7	
Danvers State Hospital . . . . .	8	
Medfield State Hospital . . . . .	5	
Westborough State Hospital . . . . .	11	
McLean Hospital . . . . .	4	
Chelsea Soldiers' Home . . . . .	9	
Total . . . . .	—	482

During the year nurses left as follows:

Instructor resigned . . . . .	1
Graduate nurse transferred to be Instructor, . . . . .	1
Graduate nurses transferred to be Supervisors . . . . .	6
Graduates resigned . . . . .	22
Graduates dropped for illness . . . . .	4
Graduates dropped — temporarily employed, . . . . .	3
Graduate (half time) resigned . . . . .	1
Pupils graduated . . . . .	36
Pupils dropped (illness) . . . . .	5
Probationers left . . . . .	12
Probationers dropped for various reasons . . . . .	18
Probationer died . . . . .	1
Graduate male nurses left . . . . .	4
Graduate male nurses dropped . . . . .	3
Graduate floor nurses resigned . . . . .	21
Graduate floor nurses dropped (illness) . . . . .	1
Affiliated pupils dropped (illness) . . . . .	6
Special nurses decreased . . . . .	7
Westborough State Hospital nurses left . . . . .	2

Affiliated pupils who have completed course:

Bath City Hospital . . . . .	4
Chelsea Memorial Hospital . . . . .	7
Lawrence General Hospital . . . . .	20
Long Island Hospital . . . . .	21
Charlesgate Hospital . . . . .	7
Massachusetts General Hospital . . . . .	2
Emerson Hospital . . . . .	7
<i>Carried forward</i> . . . . .	222
	940

<i>Brought forward</i> . . . . .	222	940
Chelsea Soldiers' Home . . . . .	5	
Cambridge Hospital . . . . .	41	
Cambridge City Hospital . . . . .	10	
St. Margaret's Hospital . . . . .	16	
Portsmouth Hospital . . . . .	7	
Worcester Memorial Hospital . . . . .	16	
Quincy City Hospital . . . . .	15	
New England Hospital . . . . .	10	
Leonard Morse Hospital . . . . .	9	
Paine Hospital . . . . .	3	
Franklin County Hospital . . . . .	12	
Worcester State Hospital . . . . .	12	
Taunton State Hospital . . . . .	3	
Danvers State Hospital . . . . .	10	
Medfield State Hospital . . . . .	4	
Grafton State Hospital . . . . .	5	
<hr/>		
Total . . . . .		400
Number remaining January 1, 1931 . . . . .		<hr/>
		540
		<hr/>

## NURSES CONNECTED WITH THE SCHOOL JANUARY 1, 1931.

*Main Hospital:*

Superintendent of Nurses . . . . .	1
Assistants . . . . .	6
Instructors . . . . .	4
Supervisors . . . . .	5
Graduate female nurses . . . . .	64
Graduate male nurses . . . . .	10
Floor nurses . . . . .	30
Special nurses . . . . .	73
Boston City Hospital pupil nurses . . . . .	124
Probationers . . . . .	49

## Affiliated pupils as follows:

Worcester State Hospital . . . . .	10
Danvers State Hospital . . . . .	9
Cambridge Hospital . . . . .	9
Leonard Morse Hospital . . . . .	4
Chelsea Soldiers' Home . . . . .	3
Long Island Hospital . . . . .	9
Paine Hospital . . . . .	3
Bath City Hospital . . . . .	2
Medfield State Hospital . . . . .	5
Taunton State Hospital . . . . .	7
New England Hospital . . . . .	3
Grafton State Hospital . . . . .	5
<hr/>	

*Carried forward* . . . . . 435

<i>Brought forward</i> . . . . .	435
Cambridge City Hospital . . . . .	1
Franklin County Public Hospital . . . . .	3
Chelsea Memorial Hospital . . . . .	2
Lawrence General Hospital . . . . .	6
Emerson Hospital . . . . .	3
Charlesgate Hospital . . . . .	2
St. Margaret's Hospital . . . . .	4
Westborough State Hospital . . . . .	9
McLean Hospital . . . . .	4

Total . . . . .	469
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*Out-Patient Department:*

Supervisor . . . . .	1
Graduates (female) . . . . .	12
Graduate (male) . . . . .	1
Total . . . . .	14

*South Department:*

Matron . . . . .	1
Assistants . . . . .	2
Graduates . . . . .	11
Boston City Hospital pupils . . . . .	10

*Affiliated pupils as follows:*

Quincy City Hospital . . . . .	11
Worcester Memorial Hospital . . . . .	3
Portsmouth Hospital . . . . .	2
Cambridge City Hospital . . . . .	1
Franklin County Hospital . . . . .	3

Total . . . . .	44
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*Haymarket Square Relief Station:*

Matron . . . . .	1
Graduate . . . . .	1
Boston City Hospital pupils . . . . .	3
St. Margaret's Hospital pupils . . . . .	2

Total . . . . .	7
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*East Boston Relief Station:*

Matron . . . . .	1
Boston City Hospital pupil . . . . .	1
New England Hospital pupils . . . . .	2

Total . . . . .	4
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<i>Carried forward</i> . . . . .	538
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*Brought forward* . . . . . 538

*Convalescent Home:*

Matron . . . . .	1	
Graduate nurse . . . . .	1	
Total . . . . .	2	
<hr/>		
Total entire Hospital, excepting Sanatorium Division . . . . .	540	
		<hr/>

CHANGES IN THE STAFF OF EXECUTIVES AND MEDICAL  
AND ADMINISTRATIVE ASSISTANTS.

Dr. Herbert G. Dunphy, Resident Surgeon at the Main Hospital, left the first of January and William S. Justice, M. D., succeeded to the position. At the same time, Edward A. Cooney, M. D., Assistant Resident Surgeon, left and Charles A. Knowles, M. D., was transferred from the position of Executive Assistant to that of Assistant Resident Physician. Alfred M. Roscoe, M. D., Executive Assistant, resigned in September and Charles A. Galligan, M. D., succeeded to the position thus left vacant. Lewis R. Dretler, M. D., was appointed Executive Assistant for the vacancy caused by Doctor Galligan's promotion. Samuel Sidell, M. D., was appointed Executive Assistant in November.

George R. Murphy, M. D., Night Executive Assistant, left in September, Daniel J. McSweeney, M. D., succeeding to the position.

In June, Edward D. Churchill, M. D., Associate Surgeon and Director of Surgical Research, resigned, and Stephen J. Maddock, M. D., was appointed Director of Surgical Research. Stanley J. G. Nowak, M. D., Resident Surgeon for the Fifth Surgical Service, resigned in August, to become Associate Surgeon and Assistant in Surgical Research.

The position of Chief of Clinical Laboratories having been created, Dr. Donald C. Hoffman was appointed for the work, beginning in July.

Herbert S. Saver, M. D., Assistant in Medicine for the First Medical Service, having been nominated by Tufts Medical School for teaching work, left in October, and Morton S. Stern, M. D., succeeded to the position.

Abraham L. Pierson, M. D., Assistant to the Third Medical Service, having been nominated by Tufts Medical School for teaching work, resigned in March. Harry Freeman, M. D., succeeded to this work for the

term, March to July, when he left. Israel Kopp, M. D., succeeded to the position in October.

Norman W. Elton, M. D., Resident Physician for the Fifth Medical Service, began in October.

Upon Doctor Nowak's leaving the position of Resident Surgeon for the Fifth Surgical Service, Robert Aldrich, M. D., became Resident Surgeon of that Service.

Edward J. Marshall, M. D., Resident Surgeon of the Sixth Surgical Service, resigned the first of the year, and Harold Ragolsky, M. D., succeeded him. Doctor Ragolsky served through the entire year.

In June, J. William Burke, M. D., became Resident Surgeon for the Out-Patient Department.

The position of Resident Radiologist was created in June and William S. Altman, M. D., was appointed to the position. Upon Doctor Altman's resignation in November, Anthony E. Peters, M. D., House Officer for X-Ray Service, became Resident.

Jacob E. Finesinger, M. D., Resident Physician, Neurological Service, resigned in September, and Merrill Moore, M. D., succeeded him.

Helmer P. Howd, M. D., served as Resident Physician for Neuro-Surgical Service from March 15 to June 1, when Walter Wegner, M. D., became Resident Physician for Neuro-Surgical Service.

Samuel H. Segool, M. D., Resident Physician for Pediatric Service, was transferred to the South Department as Assistant Physician in July, and Morris Ingall, M. D., was appointed Resident Physician for Pediatric Service.

On account of the merging of all routine laboratories under one head, William R. Ohler, M. D., resigned as Assistant in Clinical Pathology, and now gives more time to clinical work with patients as well as having charge of details connected with graduate teaching at the Hospital under the Graduate Department of Harvard Medical School.

In July, the following changes were made in the staff of the Pathological Laboratory: Douglas M. Gay, M. D., Pathologist at the Sanatorium Division; Thomas D. Spies, M. D., First Assistant in Pathology; Williams Cochran, M. D., Resident Assistant in Pathology, and Albert P. D'Errico, M. D., Resident Assistant in Pathology, resigned their positions. The following promotions were made: Thomas T. Walker, M. D., Third Assistant in Pathology, to the position of Pathologist at the

Sanatorium Division; George K. Mallory, M. D., Second Assistant in Pathology, to the position of First Assistant in Pathology; William A. Winn, M. D., Resident Assistant in Pathology, to the position of Second Assistant in Pathology. The following appointments were made: James M. Woodall, M. D., Third Assistant in Pathology; John B. Hazard, M. D., Henry F. Howe, M. D., and Alexander S. Dowling, M. D., as Resident Assistants in Pathology.

In October, Harold E. MacMahon, M. D., was appointed Teaching Assistant in Pathology at the Boston City Hospital for the ensuing school year.

The title of George R. Minot, M. D., was changed to read: "Director of the Thorndike Memorial Laboratory, Director of the Second Medical Service, Director of the Fourth Medical Service."

Dr. Soma Weiss was made Assistant Director of the Thorndike Memorial Laboratory as well as Associate Physician.

Chester S. Keefer, M. D., was appointed Associate Physician in September.

Stacy R. Mettier, M. D., Assistant Physician, resigned in August and Claude E. Forkner, M. D., was appointed Assistant Physician.

The following changes have occurred among the Research Fellows of the Thorndike Laboratory: James M. Bethea, M. D., Resident Physician for Pneumonia Service and Research Fellow, Thorndike Laboratory, served from the early part of June until September first, 1930, when Thomas N. Hunnicutt, Jr., M. D., succeeded to the position. William Raab, M. D., served as Research Fellow from February until July, 1930. Albert G. Young, M. D., ended a service of two years as Research Fellow in July, 1930. Janet Vaughan, M. D., ended a ten month's service as Research Assistant in August, 1930. Eugene C. Glover, M. D., Fourth Medical House Officer also Research Fellow, Thorndike Laboratory, left in July to study cancer in Belgium. Frank Fremont-Smith, M. D., and William G. Lennox, M. D., left their positions of Research Assistant in the Thorndike Laboratory to take up the work in the new Neurological Laboratory, on August 12, 1930.

The following Research Fellows began service during the year: David M. Davis, M. D., in April, 1930; Greene S. FitzHugh, M. D., in June, 1930; Chi Shih

Yang, M. D., James F. Rinehart, M. D., and Richard P. Stetson, M. D., in September, 1930.

During the year, the following Assistant Resident Physicians in the Thorndike Memorial Laboratory have resigned their positions: George E. Lewis, M. D., in July, and Richard T. Beebe, M. D., and Arthur A. Marlow, M. D., in September; and the following Assistant Resident Physicians have been appointed: Thomas McNair Scott, M. D., in August, and Clark W. Heath, M. D., in September.

Greene S. FitzHugh, M. D., Assistant Resident, Thorndike Laboratory and Resident for Medical Afternoon Out-Patient Clinic, left this work in June to become Research Fellow, and George P. Robb, M. D., was appointed to the position in September; James M. Bethea, M. D., fulfilling the duties of this position during the interim of time from June to September.

In September, when Clark W. Heath, M. D., Resident Physician for Tropical Diseases and Assistant Resident Physician, Thorndike Laboratory, was appointed Assistant Resident Physician, Thorndike Laboratory, Maurice B. Strauss, M. D., succeeded to this position of Resident Physician for Tropical Diseases and Assistant Resident Physician.

The position of Resident Physician for Pneumonia Service and Research Fellow, Thorndike Laboratory, has been filled by James M. Bethea, M. D., from March 1 to September 1, he being succeeded by Thomas N. Hunnicutt, Jr., M. D.

In July, John B. Lynch, M. D., and Harold D. Pyle, M. D., Assistant Physicians at the South Department, left and Samuel H. Segool, M. D., was appointed Assistant Physician. In October, Pembroke N. MacDermott, M. D., became Assistant Physician at the South Department.

I desire to express to the Trustees my gratitude for the evidences of trust and support which they are constantly extending to me.

For the loyal and faithful assistance of the Hospital Officers and Heads of Departments, I am truly grateful.

JOHN J. DOWLING, M. D.,  
*Superintendent and Medical Director.*

## BEQUESTS.

## FUNDS WITH INTEREST ONLY AVAILABLE.

*All Departments Except Sanatorium Division.*

<i>Ball Fund.</i> — For the benefit of patients leaving the hospital poor and destitute of proper clothing . . . . .	\$1,000 00
<i>Albert N. Blodgett Fund.</i> — To be used for employment of special nurses:	
In savings bank . . . . .	7,262 36
<i>William T. Bolton Fund.</i> — For the benefit of The Boston City Hospital . . . . .	500 00
<i>Herbert L. Burrell Ether Prize Fund.</i> — For a money prize to be given to the house officer who administers ether or other anesthetic in the most skilful and humane manner . . . . .	1,000 00
<i>Martha Howard Thurston Carter Fund.</i> — For books for the benefit of the Training School for Nurses . . . . .	2,000 00
<i>Cheever Fund.</i> — To purchase and present to each house surgeon when his service expires a pocket case of surgical instruments, as a gift from Dr. David W. Cheever . . . . .	3,500 00
<i>Patrick A. Collins Memorial Library Fund.</i> — For the purchase of new books for the use of hospital patients and for the replacing of those that have become damaged, lost or destroyed . . . . .	530 00
<i>Silas Durkee Fund.</i> — For the benefit of The Boston City Hospital . . . . .	15,050 00
<i>Charles F. Folsom Fund.</i> — “Income to be paid to Martha W. Folsom during her life, and, after her death, to be used toward maintenance of a free bed in memory of the late Dr. Charles Follen Folsom” . . . . .	5,000 00
<i>Daniel S. Ford Fund.</i> — For the benefit of The Boston City Hospital . . . . .	6,000 00
<i>Ann Maria Fosdick Fund.</i> — To be used for employment of special nurses:	
In savings bank . . . . .	\$13,791 98
Stocks received from executor in hands of City Treasurer . . . . .	672 00
	<hr/> 14,463 98
<i>Carried forward . . . . .</i>	<hr/> \$56,306 34

<i>Brought forward</i> . . . . .	\$56,306 34
<i>Goodnow Fund.</i> — For the support of free beds . . . . .	26,000 00
<i>Goodnow Library Fund.</i> — For replenishing the library of the hospital with books and pamphlets suitable for the reading of the patients during convalescence . . . . .	1,000 00
<i>Charles P. Hemenway Fund.</i> — For a free bed, to be known as the Charles P. Hemenway Memorial Bed . . . . .	5,000 00
<i>Dr. George S. Hyde Fund.</i> — For the support of a free bed . . . . .	5,000 00
<i>Marcus Morton Keyes Fund.</i> — For the benefit of The Boston City Hospital . . . . .	\$1,050 00
For the benefit of the Relief Stations . . . . .	1,050 00
Interest . . . . .	1 10
	<hr/>
	2,101 10
<i>Nichols Fund.</i> — For the establishment and endowment of a City Hospital . . . . .	2,000 00
<i>Norcross Fund.</i> — For the benefit of patients leaving the hospital poor and destitute of proper clothing . . . . .	2,000 00
<i>Nurses' Fund.</i> — To be used under direction of superintendent and staff for employment of special nurses:	
Invested . . . . .	\$17,930 00
Cash in hands of City Treasurer, . . . . .	295 34
	<hr/>
	18,225 34
<i>Perkins Fund.</i> — For books for the Medical Library, and for the purchase of artificial limbs and surgical appliances for the use and relief of patients leaving the hospital . . . . .	7,500 00
<i>Shaw Fund.</i> — For the purchase of flowers and fruit for the use and comfort of the patients in the hospital . . . . .	2,000 00
<i>Hettie Lang Shuman Memorial Library Fund.</i> — To be expended in perpetuity by the Trustees for new books for the use of hospital patients and for replacing volumes that have become damaged, lost or destroyed . . . . .	2,000 00
<i>Timothy Smith Fund.</i> — For the purpose of maintaining and conducting The Boston City Hospital; by vote of Trustees to be expended for special nurses . . . . .	5,000 00
	<hr/>
<i>Carried forward</i> . . . . .	\$134,132 78

<i>Brought forward</i> . . . . .	\$134,132 78	
<i>Joseph Thompson Fund.</i> — To be used for employment of special nurses:		
Invested . . . . .	\$3,775 00	
Cash in hands of City Treasurer, . . . . .	1 41	
		3,776 41
<i>Catherine Watson Fund.</i> — \$6,000 for a free bed, to be known as the William F. Watson Free Bed. (Interest to be allowed to accumulate until fund reaches \$25,000.) . . . . .		8,112 13
<i>Mehitable C. C. Wilson Fund.</i> — For the benefit of Medical Library . . . . .		500 00
Total . . . . .		<u>\$146,521 32</u>

## FUNDS WITH BOTH PRINCIPAL AND INTEREST AVAILABLE.

<i>Julia M. Robey Fund.</i> — To be used for improvement at Convalescent Home . . . . .	\$3,056 26	
<i>Shuman Memorial Building for Convalescent Men.</i> — To erect on City land a building to be known as the A. Shuman Building for Convalescent Men . . . . .		104,210 34
Total . . . . .		<u>\$107,266 60</u>

## HOUSE RULES.

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WITH RULES FOR ADMISSION, GOVERNMENT AND DIS-  
CHARGE OF PATIENTS; ALSO RULES FOR VISITORS.

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### HOUSE RULES.

The doors and gates of the Hospital will be closed at 10 o'clock in the evening, at which time all inmates, excepting Head Nurses (who are permitted to remain out until 12 o'clock midnight), shall be quiet, and all not on duty shall be in their rooms, unless otherwise specifically permitted.

All officers, nurses and employees of the Hospital when going and coming to and from the Hospital, shall enter and go out by the Entrance Office, and by no other entrance. Such officers and employees as are required shall use the time register and method of booking that the Hospital rules require.

A record shall be kept of all persons entering the Hospital between the hours of 10 o'clock in the evening and 7.30 o'clock in the morning.

No employees shall be absent from the Hospital except when permitted by special rules or by the Superintendent.

When requesting leave of absence for health reasons, an employee must present a recommendation from some member of the Hospital Visiting Staff, certifying to the necessity for such absence.

No discharged employee shall be reinstated without the consent of the Board of Trustees.

No officer, nurse, male nurse or other employee shall, directly or indirectly, receive money or other gifts from or in behalf of patients, except with the approval of the Superintendent.

The use of tobacco, wine and intoxicating liquors is prohibited within the Hospital, unless prescribed by the Visiting Physicians or Surgeons.

All profane and improper language, loud talking and incivility are prohibited.

All employees shall observe such further rules and directions for their conduct as may from time to time be established.

#### ADMISSION OF PATIENTS.

No person having acute venereal disease or alcoholism shall be admitted, unless his condition is urgent, except as a paying patient.

No person shall be admitted to the Hospital whose case is judged to be incurable, unless there be urgent symptoms which are deemed capable of being relieved.

Persons with state settlements, unless they stand in need of immediate relief, are to be referred to the State Hospitals.

Patients settled in other cities and towns in Massachusetts are to be referred to their own city or town for treatment, Boston cases being given the preference.

Unsettled cases, if resident in Boston, may be admitted as paying patients.

Patients may be admitted to the privileges of the Hospital at such rates of board as the Trustees may from time to time by vote determine, payment for such cases being secured by the friends of the patient or by the authorities of the city or town in which the patient is legally settled.

Whenever, in the opinion of the Trustees, the circumstances of the patient will warrant it, the whole or a part of the board shall be paid.

If separate apartments or articles not usually furnished at the Hospital are furnished, such payment shall be made therefor as the Trustees shall deem reasonable.

Persons nonresident and not settled in Boston are to be admitted only as private patients, *i. e.*, paying patients in private rooms.

All accident or emergency cases shall be received at all hours, night or day, irrespective of settlement.

In all cases where any question arises as to the treatment of newly admitted or other patients, it shall be the duty of the House Officer to consult with the Executive on duty in regard to such treatment until the arrival of the Visiting Physician or Surgeon.

If, in the judgment of the Admitting Physician, the condition of a newly admitted patient is sufficiently urgent to demand the attention of the visiting staff, he

shall so notify the House Officer and shall direct him to call his Visiting Physician or Surgeon.

In case alcoholic drink is administered to a patient before or after placing him in the ambulance, or by any other than Hospital employees before the arrival of the ambulance, the same is to be promptly reported to the Admitting Physician, and a record of the fact made in the clinical record book. This rule covers cases brought by conveyances other than Hospital ambulances.

#### GOVERNMENT OF PATIENTS.

Patients shall implicitly observe all the rules of the Hospital.

Patients shall be in their proper places in the wards during the visits of the Visiting Physicians and Surgeons, and always before 7.30 o'clock in the evening, unless specially excused by the Superintendent.

Such free patients as are able shall assist in nursing and perform such other services as may be reasonably required of them.

No patient shall leave the Hospital grounds without a pass from the Superintendent, nor leave his ward without the consent of the Nurse in charge.

No patient shall purchase, or cause to be purchased for him, any article of food whatsoever, nor any other article, without the consent of the Superintendent.

Profane and obscene language, loud talking and incivility are prohibited.

Patients may be visited by clergymen of their own selection, and any wish for the performance of a particular religious rite shall be granted when practicable.

Complaints, for whatever cause, may be made to the Superintendent, and whenever requested shall be by him reported to the Trustees.

#### DISCHARGE OF PATIENTS.

Patients shall be discharged by the Superintendent.

Upon the request of patients discharged on the recommendation of the Visiting Physicians or Surgeons, they shall be provided with a certificate stating their condition at the time of discharge, whether cured, relieved or not relieved, which certificate shall be signed by the Superintendent.

Whenever a patient is removed from the Hospital without the approval of the Superintendent, a written

statement to that effect shall be required from any person assuming the responsibility of the removal.

#### VISITORS.

No person shall visit any part of the premises except on business, or at such times as may be fixed for the reception of visitors, without the permission of the Superintendent or of some one of the Trustees.

Daily, from 2 to 3 o'clock in the afternoon, friends may be permitted to visit patients, though no patient shall receive more than two visitors at that hour; and from 6 to 6.30 o'clock on each week day friends may be permitted to visit patients, though no patient shall receive more than one visitor at that hour. Children under sixteen years of age are prohibited from visiting the Children's Wards. In all cases, however, the Trustees and the Superintendent may exercise discretionary powers as to excluding or admitting visitors.

When visitors are admitted outside the regular visiting hours they shall not be permitted to remain more than half an hour, unless a special permission to remain longer is granted.

All visitors shall leave the Hospital when the bell rings at the expiration of the visiting hour.

No visitor shall take any meal in the Hospital, or pass the night therein, without permission of the Superintendent or one of the Trustees.

No visitor shall be allowed to give any article of food or drink to a patient except by permission of the Nurse; and any article sent to a patient shall be left at the Entrance Office.

## SPECIAL RULES FOR THE GOVERNMENT OF THE SOUTH DEPARTMENT.

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The department of The Boston City Hospital located on the westerly side of Massachusetts avenue shall be designated as the South Department of The Boston City Hospital. It shall receive patients who require treatment for diphtheria, scarlet fever, measles, whooping cough, and other contagious diseases as may be determined from time to time by the Trustees.

The Superintendent and Medical Director of the Hospital shall, under the direction of the Trustees, have the general control and management of this department in the same manner as of other departments of the Hospital.

The rules of the Hospital shall, so far as applicable, and except as hereinafter provided, apply to the various officers and employees and to the conduct and management of this department.

## SPECIAL RULES FOR THE GOVERNMENT OF THE HAYMARKET SQUARE AND THE EAST BOSTON RELIEF STATIONS.

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The Boston City Hospital Relief Stations are established not as hospitals, but as departments of The Boston City Hospital for temporary relief, and the rules and methods prevailing now in the Hospital shall, so far as applicable, and not inconsistent with special rules, apply to the Relief Stations.

The Stations shall afford temporary relief in all classes of accident and disease. They shall be open at all hours for patients requiring treatment or attention. Patients requiring ward treatment whether received at the Stations or taken up in ambulances, shall, so far as is consistent with their welfare, be forthwith transferred or carried to the Hospital for extended treatment, but ward accommodations shall be afforded patients whose condition is such that they cannot properly be transferred. Patients may, however, if it is deemed desirable, be transferred by the ambulances to other hospitals or to their homes. First treatment may be afforded at the Stations although the applicants are not such as require ward treatment.

The Superintendent of the Hospital shall have the general administration, management and control of the Stations, the same as of other departments of the Hospital.

The Superintendent shall, once a year, nominate for confirmation by the Trustees a Resident Surgeon and one or more Assistant Resident Surgeons for each Station; and shall appoint and employ or detail for service in each department, from time to time, as may be necessary, subject to the approval of the Trustees or of the proper committees, a Matron, a Supervisor, Nurses, Male Nurses and such other minor employees as may be required for the proper conduct of the Station, who shall be subject to his supervision.

The various officers and employees of the Stations shall perform such duties other than those specified as may be required by the Trustees or the Superintendent, according to the nature of their respective duties. The Resident Surgeons, the Matrons, Supervisors, and such other officers as may be so required, shall reside at the Stations.

#### PATIENTS.

Alcoholic and insane patients shall not be received unless there is surgical or medical complication making hospital treatment absolutely necessary.

No patient, after being admitted to the wards, shall leave the Station until his discharge without a pass from the proper officer, nor shall he visit other parts of the Station without permission.

Ward patients shall be discharged by the Superintendent or the Resident Surgeon.

#### AMBULANCE SERVICE AT THE HAYMARKET SQUARE RELIEF STATION.

The ambulance service of the Station shall be under the direct control of the Resident Surgeon, and shall cooperate with that of the Hospital with which it shall form one general system. Ambulances shall, in response to calls, be dispatched from the Station or the Hospital as the exigency may require. The utmost dispatch shall be exercised in the ambulance service, so far as is consistent with a regard for the welfare of the patient and the interests of the public.

Ambulances shall in general be sent from the Station or the Hospital, at least upon a general alarm, to all fires occurring in the City Proper and in such further districts as may be determined upon.

An ambulance shall be held during the hours of the day in complete readiness to make immediate response to calls, and shall be kept in condition to make prompt response to calls at any time of the night.

A House Officer shall accompany the ambulance, shall direct its course and shall have direction of the care and treatment of the patient until received at his destination.

The foreman of the ambulance service at the Hospital Station shall visit and inspect the Ambulance Depart-

ment of the Station from time to time, but the immediate carrying out of directions shall be under the Assistant Foreman at the Station.

AMBULANCE SERVICE AT THE EAST BOSTON RELIEF  
STATION.

The rules and methods prevailing in the Haymarket Square Relief Station ambulance service shall, so far as applicable, be effective in the East Boston Relief Station ambulance service.

## SPECIAL RULES FOR THE GOVERNMENT OF THE CONVALESCENT HOME.

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The department of The Boston City Hospital located on Dorchester avenue, in Dorchester, shall be known as the Convalescent Home, and shall receive such patients recovering from acute diseases as shall be transferred to it from the Main Hospital for treatment during convalescence.

The Superintendent of the Hospital shall, under the direction of the Trustees, have the control and management of the Convalescent Home in the same manner as of other departments of the Hospital.

The Superintendent shall appoint, subject to the approval of the Trustees, a Matron, and shall employ, under their direction, such further assistants as may be necessary for the proper conduct and service of the home.

The Matron, under the direction of the Superintendent, shall have the immediate charge of the home and the control of all nurses and other employees and patients. She shall reside at the Home.

### VISITORS.

Friends may be permitted to visit patients daily between three and four o'clock in the afternoon. In all cases the Trustees, Superintendent and Matron may exercise discretionary powers as to excluding or admitting visitors.

Visitors shall leave the Home and grounds at the expiration of the visiting hour, and shall visit no part of the Home or grounds other than the reception room, except by permission from the proper authority.

No person shall give any article of food or drink to a patient unless by permission of the Matron.

## TRUSTEES.

JOSEPH P. MANNING, <i>President</i> . . .	Term expires in 1931.
HENRY S. ROWEN, M. D., <i>Secretary</i> . . .	Term expires in 1932.
GEORGE G. SEARS, M. D. . . . .	Term expires in 1933.
CARL DREYFUS . . . . .	Term expires in 1935.
KARL ADAMS . . . . .	Term expires in 1934.

## MEDICAL AND SURGICAL STAFF.

*Consulting Physicians and Surgeons.*

Abner Post, M. D.	George G. Sears, M. D.
H. W. Cushing, M. D.	John Bapst Blake, M. D.
Francis S. Watson, M. D.	Paul Thorndike, M. D.
George H. Monks, M. D.	John L. Ames, M. D.
Elliott P. Joslin, M. D.	Fred B. Lund, M. D.
Henry Jackson, M. D.	Joshua B. Hubbard, M. D.

*Consulting Pathologists.*

W. T. Councilman, M. D.	F. B. Mallory, M. D.
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*Consultant in Tropical Diseases.*

Richard P. Strong, M. D.

*Consultant in Ophthalmology*

Allen Greenwood, M. D.

*Consulting Aural Surgeon.*

Rockwell A. Coffin, M. D.

*Consulting Physicians in Neurology.*

Arthur W. Fairbanks, M. D.	John J. Thomas, M. D.
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*Curator of the Hospital Museum.*

Dwight O'Hara, M. D.

*Senior Physician.*

Francis H. Williams, M. D.

*Visiting Physicians.*

William H. Robey, M. D.*	George R. Minot, M. D.†
Ralph C. Larrabee, M. D.‡	Francis W. Palfrey, M. D.
Franklin W. White, M. D.	Cadis Phipps, M. D.§
Edwin A. Locke, M. D.	Harold W. Dana, M. D.

*Assistant Visiting Physicians.*

Thomas J. O'Brien, M. D.	Edmund F. Walsh, M. D.
William R. Ohler, M. D.	Burton E. Hamilton, M. D.

*Junior Visiting Physicians.*

Joseph M. Lynch, M. D.	George P. Reynolds, M. D.
Joseph E. Hallisey, M. D.	James M. Faulkner, M. D.
John A. Foley, M. D.	William B. Stevens, M. D.
George C. Shattuck, M. D.	Nathan Sidel, M. D.
Louis J. Ullian, M. D.	William T. O'Halloran, M. D.
Dwight O'Hara, M. D.	Soma Weiss, M. D.
Henry Jackson, Jr., M. D.	James C. Healy, M. D.
Frank S. Cruickshank, M. D.	Greene FitzHugh, M. D.
Daniel J. Hogan, M. D.	Norman A. Welch, M. D.
Louis F. Curran, M. D.	Richard P. Stetson, M. D.
Maurice Fremont-Smith, M.D.	Bernard I. Goldberg, M. D.
Percy B. Davidson, M. D.	Laurence B. Ellis, M. D.
Henry Baker, M. D.	Theodore L. Badger, M. D.

*Senior Surgeon.*

George W. Gay, M. D.

*Surgeons-in-Chief.*

Frederic J. Cotton, M. D.	Halsey B. Loder, M. D.
David D. Scannell, M. D.	Irving J. Walker, M. D.
Horace Binney, M. D.	Arthur R. Kimpton, M. D.

*Visiting Surgeons.*

Robert C. Cochrane, M. D.	Francis F. Henderson, M. D.
Otto J. Hermann, M. D.	James J. Hepburn, M. D.
Somers Fraser, M. D.	Joseph H. Shortell, M. D.

*Assistant Visiting Surgeons.*

William R. Morrison, M. D.	Thomas W. Wickham, M. D.
Edward Harding, M. D.	George W. Papen, M. D.
Thomas K. Richards, M. D.	Charles C. Lund, M. D.

\* Physician-in-Chief, Second Medical Service.

† Director of Thorndike Memorial Laboratory, Director of Second Medical Service, Director of Fourth Medical Service.

‡ Physician-in-Chief, First Medical Service.

§ Physician-in-Chief, Fourth Medical Service.

|| Physician-in-Chief, Third Medical Service.

*Junior Visiting Surgeons.*

Joseph H. Burnett, M. D.		William F. Cotting, M. D.
E. Everett O'Neil, M. D.		John J. Lucy, M. D.
Howard A. Bouvé, M. D.		

*Assistants to Visiting Surgeons.*

John A. Seth, M. D.		Allan L. Davis, M. D.
Richard I. Smith, M. D.		Daniel J. Duggan, M. D.
Newton C. Browder, M. D.		Winchester W. Everett, M. D.
William A. White, Jr., M. D.		Russell F. Sullivan, M. D.

*Visiting Surgeon for Urology.*

Herbert H. Howard, M. D.

*Assistant Visiting Surgeon for Urology.*

Augustus Riley, M. D.

*Visiting Surgeon for Neuro-Surgery.*

Donald Munro, M. D.

*Associate in Neuro-Surgery.*

Tracy J. Putnam, M. D.

*Surgeons-in-Chief for Gynecology and Obstetrics.*

Nathaniel R. Mason, M. D. | Robert M. Green, M. D.

*Visiting Surgeons for Gynecology and Obstetrics.*

John T. Williams, M. D. | Frederick L. Good, M. D.

*Assistant Visiting Surgeons for Gynecology and Obstetrics.*

Joseph P. Cohen, M. D.		Frederick J. Lynch, M. D.
Harold V. Hyde, M. D.		Reginald D. Margeson, M. D.

*Junior Visiting Surgeons for Gynecology and Obstetrics.*

Pierce J. Dunphy, M. D.		Carmi R. Alden, M. D.
Abraham S. Troupin, M. D.		G. Elliott May, M. D.

*Assistants to Visiting Surgeons for Gynecology and Obstetrics.*

William J. McDonald, M. D.		Emilio D'Errico, M. D.
Benedict F. Boland, M. D.		Kenneth G. Farnsworth, M. D.

*Ophthalmic Surgeon-in-Chief.*

Jeremiah J. Corbett, M. D.

*Assistant Visiting Ophthalmic Surgeons.*

Harry Schwartzman, M. D.		Robert W. French, M. D.
Thomas J. Hagan, M. D.		Joseph H. McLaughlin, M. D.
Paul G. Haire, M. D.		James M. Ward, M. D.

*Surgeon-in-Chief for Diseases of Ear and Throat.*

Harry P. Cahill, M. D.

*Visiting Surgeon for Diseases of Ear and Throat.*

Louis M. Freedman, M. D.

*Visiting Surgeon for Oral and Plastic Surgery.*

Varaztad H. Kazanjian, M. D.

*Assistant Visiting Surgeon for Diseases of Ear and Throat.*

Edward J. Monahan, M. D.

*Junior Visiting Surgeons for Diseases of Ear and Throat.*

Philip E. A. Sheridan, M. D.	Francis G. Minter, M. D.
William F. Regan, M. D.	Fred Heimlich, M. D.
Philip R. Dwyer, M. D.	Charles W. DeWolf, M. D.
Chester R. Mills, M. D.	Philip G. Berman, M. D.
Vincent J. Kelley, M. D.	

*Oral Surgeon-in-Chief.*

Stephen P. Mallett, D. M. D.

*Visiting Oral Surgeons.*

William H. Canavan, D. M. D. | Thomas Hennessey, D. M. D.

*Assistant Visiting Oral Surgeons.*

Douglass M. Baker, D. M. D.	Austin T. Williams, D. M. D.
George F. Winchester, D. M. D.	W. Harry Gullifer, D. M. D.

*Visiting Anesthetists.*

Frank L. Richardson, M. D. | Nathaniel N. Morse, M. D.

*Assistant Visiting Anesthetists.*

William A. Noonan, M. D. | Sidney C. Wiggin, M. D.

*Visiting Neurologists.*

Stanley Cobb, M. D. | Abraham Myerson, M. D.

*Assistant Neurologists.*

Miner H. A. Evans, M. D. | Frank Fremont-Smith, M. D.

*Junior Visiting Neurologists.*

Maxwell E. MacDonald, M. D.	Tracy J. Putnam, M. D.
William G. Lennox, M. D.	William Herman, M. D.

*Physician-in-Chief for Physical Therapeutics.*

Joseph Resnik, M. D.

*Visiting Physicians for Physical Therapeutics.*

William D. McFee, M. D. | Girdie W. Dickinson, M. D.  
Arthur J. Cole, M. D.

*Physician-in-Chief for Diseases of the Skin.*

William P. Boardman, M. D.

*Visiting Physician for Diseases of the Skin.*

Walter T. Garfield, M. D.

*Assistant Visiting Physicians for Diseases of the Skin.*

John G. Downing, M. D. | Bernard Appel, M. D.

*Junior Visiting Physician for Diseases of the Skin.*

Francis P. McCarthy, M. D.

*Physician-in-Chief for Contagious Diseases.*

Edwin H. Place, M. D.

*Roentgenologist-in-Chief.*

P. F. Butler, M. D.

*Visiting Roentgenologists.*

Max Ritvo, M. D. | Frederick W. O'Brien, M. D.  
Albert M. Moloney, M. D.

*Physician-in-Chief for Immunology.*

George P. Sanborn, M. D.

*Assistant Visiting Physicians for Immunology.*

Edmund F. Walsh, M. D. | Samuel M. Pearl, M. D.

*Pediatrician-in-Chief.*

Martin J. English, M. D.

*Visiting Pediatricians.*

Augustine W. McGarry, M. D. | Eli Friedman, M. D.

*Assistant Visiting Pediatrician.*

John J. Dunphy, M. D.

*Junior Visiting Pediatricians.*

George Kahn, M. D. | James W. Redmond, M. D.  
John P. Treanor, Jr., M. D. | Abraham N. Caplan, M. D.

*Physicians to Convalescent Home.*

John P. Treanor, M. D. | Joseph J. O'Brien, M. D.

## ASSISTANTS TO THE VISITING STAFF.

(December 31, 1930.)

Terms of one year.

*Assistants in Medicine.*

I. R. Jankelson, M. D.	Beginning January 1, 1930.
William B. Castle, M. D.	Beginning January 1, 1930.
Samuel Morein, M. D.	Beginning January 1, 1930.
Stacey R. Mettier, M. D.	Beginning January 1, 1930.
Clark Heath, M. D.	Beginning January 1, 1930.
Wheelan D. Sutliff, M. D.	Beginning January 1, 1930.
Arthur A. Marlow, M. D.	Beginning January 1, 1930.
Richard T. Beebe, M. D.	Beginning January 1, 1930.
Albert G. Young, M. D.	Beginning January 1, 1930.
Maxwell Finland, M. D.	Beginning January 1, 1930.
George E. Lewis, M. D.	Beginning January 1, 1930.
Morton S. Stern, M. D.	Beginning April 18, 1930.

*Assistants in Surgery.*

Herbert G. Dunphy, M. D.	Beginning February 1, 1930.
J. William Burke, M. D.	Beginning March 1, 1930.
Irving W. Parkhurst, M. D.	Beginning March 1, 1930.
Thomas H. Peterson, M. D.	Beginning April 1, 1930.
Henry R. Gilbert, M. D.	Beginning May 1, 1930.
John E. Hopkins, M. D.	Beginning November 1, 1930.

*Temporary Visiting Anesthetist.*

Frank W. Marvin, M. D.	Beginning November 1, 1930.
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*Assistant in Neurology.*

H. Houston Merritt, M. D.	Beginning January 1, 1930.
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*Assistant in Gynecology and Obstetrics.*

David Rose, M. D.	Beginning January 1, 1930.
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## HOUSE OFFICERS.

The following named house officers have completed service during the year 1930:

Hugh Carroll Donahue, M. D., Medical Service,	18½ months.
Maurice Benjamin Strauss, M. D., Medical Service	20 months.
Israel Steinberg, M. D., Medical Service	20 months.
James McRae Bethea, M. D., Medical Service.	20 months.
Paul Dolin Rosahn, M. D., Medical Service	19½ months.
Harry Hyman, M. D., Medical Service	20 months.
Max Irving Vinnecour, M. D., Medical Service,	20 months.
Eugene Chellis Glover, M. D., Medical Service,	18 months.
Arch Avary, Jr., M. D., Medical Service	19 months.
Israel Kopp, M. D., Medical Service	19 months.
Gottlieb Langner, Jr., M. D., Medical Service	18 months.
Samuel Shattuck Ellis, M. D., Medical Service,	19 months.
David Littman, M. D., Medical Service	17½ months.
Morton Arnold, M. D., Medical Service	18 months.
Edward Burke Kelly, M. D., Surgical Service	8½ months.
Helmer Powers Howd, M. D., Surgical Service,	20½ months.
James Lawrence Golden, M. D., Surgical Service	20½ months.
Sanford Hiram Moses, M. D., Surgical Service,	20½ months.
Abraham Ezra Hiebert, M. D., Surgical Service,	20½ months.
Theodore Crie Bramhall, M. D., Surgical Service	20½ months.
Victor Baer, M. D., Surgical Service	8 months.
Philip Oscar Pelland, M. D., Surgical Service	8 months.
Edward Allen Edwards, M. D., Surgical Service,	20½ months.
Chauncy Valentine Perry, M. D., Surgical Service	20½ months.
Lewis Robert Dretler, M. D., Surgical Service	19½ months.
Carl January DePrizio, M. D., Surgical Service,	20½ months.
Leo Raymond Desmond, M. D., Surgical Service	20 months.
Nicholas Anthony Mastroianni, M. D., Surgical Service	20½ months.
Walter Morgan O'Brien, M. D., Surgical Service,	20½ months.
William Francis Finnegan, M. D., Surgical Service	20½ months.
Louis Edmund Hathaway, Jr., M. D., Surgical Service	20 months.
Christopher James Duncan, M. D., Gynecological and Obstetrical Service	17½ months.

Lewis Paul James, M. D., Gynecological and Obstetrical Service . . . . .	18½ months.
Samuel Sidell, M. D., Gynecological and Obstetrical Service . . . . .	18½ months.
Philip Patrick McGovern, M. D., Gynecological and Obstetrical Service . . . . .	18½ months.
Thomas Edward Dinan, M. D., Ophthalmic and Aural Service . . . . .	18 months.
John Paul Tierney, M. D., Ophthalmic and Aural Service . . . . .	13 months.
James Martin Ward, M. D., Ophthalmic and Aural Service . . . . .	16½ months.
Merrill Moore, M. D., Neurological Service . . . . .	9½ months.
William Ward Rucks, Jr., M. D., Neurological Service . . . . .	6 months.
Eugene Charles Eppinger, M. D., Neurological Service . . . . .	6 months.
George William Rafferty, M. D., X-Ray Service, . . . . .	8 months.
William Soloman Altman, M. D., X-Ray Service, . . . . .	14 months.
Anthony Edwin Peters, M. D., X-Ray Service . . . . .	6 months.
Theodore Bennett, M. D., Pediatric Service . . . . .	10 months.
Earl Baldwin Wheeler, M. D., Pediatric Service . . . . .	10 months.
Arthur William Clancy, M. D., Pediatric Service, . . . . .	10 months.
Morris Ingall, M. D., Pediatric Service . . . . .	9 months.
Robert Lavrakas, M. D., Pediatric Service . . . . .	10 months.
Myer Bloom, M. D., Pediatric Service . . . . .	10 months.

## HOUSE OFFICERS ON DUTY.

January 1, 1931.

Medical Service.

### *House Physicians.*

David Littman, M. D.	Morton Arnold, M. D.
David Hurwitz, M. D.	Howard G. Bruenn, M. D.
Henry N. Rosenberg, M. D.	

### *Assistant House Physicians.*

Paul J. Fouts, M. D.	Harry Bittle, M. D.
John Adams, Jr., M. D.	John E. Brown, Jr., M. D.
Albert E. Levin, M. D.	

### *Senior Internes.*

Henry Lappin, M. D.	Max Pearlstein, M. D.
Dudleigh C. Stone, M. D.	David K. Miller, M. D.
William H. Gilliatt, M. D.	

*Externes.*

Angus C. Meagher, M. D.      Willis M. Gowen, M. D.  
 Paul B. Kelly, M. D.      Snowden C. Hall, Jr., M. D.  
                                  John G. Arent, M. D.

*Junior Internes.*

Harris H. Hamlin, M. D.      Irving Showstack, M. D.  
 Joseph Labowitz, M. D.      William P. Reed, M. D.  
                                  Juan E. Bobadilla, M. D.

## SURGICAL SERVICES.

*House Surgeons.*

Leslie C. Dodson, M. D.      Alexander P. Aitken, M. D.  
 John P. Reardon, M. D.      John S. Rhodes, M. D.  
 Charles A. Robinson, M. D.      Joseph E. Flynn, M. D.

*Senior Internes.*

Robert H. Goodwin, M. D.      Lawrence J. McCarthy, M. D.  
 Jackson Flanders, M. D.      Weston T. Buddington, M. D.  
 Dorset L. Spurgeon, M. D.      Paul W. Hugenberg, M. D.

*Accident Floor House Officers.*

George W. Rafferty, M. D.      Paul E. Tivnan, M. D.

*Externes.*

Francis J. Golden, M. D.      Olin C. Hendrix, M. D.  
 John B. Vernaglia, M. D.      Paul H. Wilson, M. D.  
 Horace C. Sweet, M. D.      Robert Ulin, M. D.

*Junior Internes.*

Henry G. Clarke, M. D.      Franklin C. Hugenberg, M. D.  
 William W. Babson, M. D.      Gale E. Wilson, M. D.  
                                  Thomas J. Anglen, M. D.

## GYNECOLOGICAL AND OBSTETRICAL SERVICES.

*House Surgeon.*

Jacob F. Deich, M. D.

*Senior Interne, Obstetrical Service.*

Edwin G. Hebb, M. D.

*Senior Interne, Gynecological Service.*

Raymond A. Johnson, M. D.

*Externe, Gynecological and Obstetrical Service.*

Richard J. Donovan, M. D.

*Junior Interne, Obstetrical Service.*

Leroy C. Gross, M. D.

*Etherizer, Gynecological and Obstetrical Service.*

James F. Conway, M. D.

## OPHTHALMIC AND AURAL SERVICES.

*Resident Surgeon.*

Samuel J. Hartmere, M. D.

*House Surgeon.*

Joseph J. Nerbonne, M. D.

*Senior Interne.*

Aaron Kaufman, M. D.

*Externe.*

Harry V. Byrne, M. D.

*Junior Interne.*

Arthur W. Clancy, M. D.

## NEUROLOGICAL AND NEURO-SURGICAL SERVICES.

*House Physician, Neurological Service.*

Philip Solomon, M. D.

*House Surgeon, Neuro-Surgical Service.*

Madelaine R. Brown, M. D.

*Senior House Officer, Neurological Service.*

John B. McKenna, M. D.

*Senior House Officer, Neuro-Surgical Service.*

Antoine Schneider, M. D.

*Junior House Officer, Neurological Service.*

George R. Lavine, M. D.

## PEDIATRIC SERVICE.

*Senior Out-Patient House Officer.*

Joseph Gitter, M. D.

*House Physician.*

Carl A. DeSimone, M. D.

*Senior Interne.*

Herbert Sherwin, M. D.

*Externe.*

Jacob I. Abrams, M. D.

*Junior Interne.*

Leonard W. Benedetto.

## X-RAY SERVICE.

Harold I. Loverud, M. D.      Benjamin Li, M. D.

## PNEUMONIA SERVICE.

*Student Assistant.*

Charles W. Steele.

## HOUSE OFFICERS AT THE SOUTH DEPARTMENT.

Myer Asekoff, M. D.	Leo D. Jacobs, M. D.
Harold E. Pressey, M. D.	Robert P. Goodkind, M. D.

## HOUSE OFFICERS AT THE HAYMARKET SQUARE RELIEF STATION.

Williams Cochran, M. D.	Robert J. Joplin, M. D.
Duane M. Carr, M. D.	

## HOSPITAL OFFICERS.

John J. Dowling, M. D., *Superintendent and Medical Director.*  
Charles H. Pelton, M. D., *Assistant Superintendent.*  
James W. Manary, M. D., *Executive Director of the Out-Patient Department.*  
Francis S. Brodrick, M. D., *Executive Assistant.*  
M. Winthrop O'Connell, M. D., *Executive Assistant.*  
Charles A. Galligan, M. D., *Executive Assistant.*  
Samuel Sidell, M. D., *Executive Assistant.*  
Daniel J. McSweeney, M. D., *Night Executive Assistant.*  
Charles A. Knowles, M. D., *Resident Surgeon.*  
Lewis R. Dretler, M. D., *Assistant Resident Surgeon.*  
Frank B. Mallory, M. D., *Pathologist.*  
George R. Minot, M. D., *Director of the Thorndike Laboratory.*  
P. F. Butler, M. D., *Roentgenologist-in-Chief.*  
Stephen J. Maddock, M. D., *Director of Surgical Research.*  
Donald C. Hoffman, M. D., *Director of Clinical Laboratories.*  
A. T. Kirk, Ph.G., *Chief Pharmacist.*  
Miss Emma M. Nichols, *Counsellor to the Training School.*  
Miss Della M. Currier, *Superintendent of Nurses and Matron.*  
Miss Gertrude L. Farmer, *Director of Social Work.*  
Miss Joanna E. Sweeney, *Registrar.*  
Miss Ruth T. Church, *Out-Patient Registrar.*  
Miss Margaret McGovern, *Dietitian.*

## SOUTH DEPARTMENT.

John J. Dowling, M. D., *Medical Director.*  
Edwin H. Place, M. D., *Physician-in-Chief.*  
Miss Edith M. Grant, *Assistant Superintendent of Nurses and Matron.*

## HAYMARKET SQUARE RELIEF STATION.

Bernard F. Devine, M. D., *Resident Surgeon.*  
George Robbins, M. D., *Assistant Resident Surgeon.*  
Miss Agatha P. McKenna, *Matron.*

## EAST BOSTON RELIEF STATION.

Arthur G. Holland, M. D., *Resident Surgeon.*  
James V. Sacchetti, M. D., *Assistant Resident Surgeon.*

## CONVALESCENT HOME.

Miss E. C. Fairbanks, *Matron.*

## MEDICAL AND ADMINISTRATIVE ASSISTANTS.

- Joseph Resnik, M. D., *Physician-in-Chief for Physical Therapeutics.*  
Edmund F. Walsh, M. D., *Clinical Bacteriologist.*  
Frederic Parker, Jr., M. D., *Assistant Pathologist.*  
George K. Mallory, M. D., *First Assistant in Pathology.*  
William A. Winn, M. D., *Second Assistant in Pathology.*  
James M. Woodall, M. D., *Third Assistant in Pathology.*  
Thomas T. Walker, M. D., *Pathologist at Sanatorium Division.*  
Alexander S. Dowling, M. D., *Resident Assistant in Pathology.*  
John B. Hazard, M. D., *Resident Assistant in Pathology.*  
Henry F. Howe, M. D., *Resident Assistant in Pathology.*  
Soma Weiss, M. D., *Assistant Director and Associate Physician in Thorndike Laboratory.*  
Robert N. Nye, M. D., *Associate Physician in Thorndike Laboratory.*  
Henry Jackson, Jr., M. D., *Associate Physician in Thorndike Laboratory.*  
William B. Castle, M. D., *Associate Physician in Thorndike Laboratory.*  
Chester S. Keefer, M. D., *Associate Physician in Thorndike Laboratory.*  
Wheelan D. Sutliff, M. D., *Assistant Physician in Thorndike Laboratory.*  
Gulli Lindh Muller, M. D., *Assistant Physician in Thorndike Laboratory.*  
Claude E. Forkner, M. D., *Assistant Physician in Thorndike Laboratory.*  
Laurence B. Ellis, M. D., *Resident Physician in Thorndike Laboratory.*  
Maxwell Finland, M. D., *Assistant Resident Physician in Thorndike Laboratory.*  
Thomas McNair Scott, M. D., *Assistant Resident Physician in Thorndike Laboratory.*  
Clark W. Heath, M. D., *Assistant Resident Physician in Thorndike Laboratory.*  
George P. Robb, M. D., *Assistant Resident Physician, Thorndike Laboratory and Resident Physician, Medical Afternoon Out-Patient Clinic.*  
Maurice B. Strauss, M. D., *Assistant Resident Physician, Thorndike Laboratory and Resident Physician for Tropical Diseases.*  
Thomas N. Hunnicutt, M. D., *Research Fellow, Thorndike Laboratory and Resident Physician for Pneumonia Service.*  
Percy B. Davidson, M. D., *Research Fellow, Thorndike Laboratory.*

James M. Faulkner, M. D., *Research Fellow, Thorndike Laboratory.*

Francis H. L. Taylor, M. D., *Research Fellow, Thorndike Laboratory.*

David M. Davis, M. D., *Research Fellow, Thorndike Laboratory.*

Greene S. FitzHugh, M. D., *Research Fellow, Thorndike Laboratory.*

Chi-Shih Yang, M. D., *Research Fellow, Thorndike Laboratory.*

James F. Rinehart, M. D., *Research Fellow, Thorndike Laboratory.*

Richard P. Stetson, M. D., *Research Fellow, Thorndike Laboratory.*

Max Ritvo, M. D., *Assistant Roentgenologist.*

Frederick W. O'Brien, M. D., *Assistant Roentgenologist.*

Albert M. Moloney, M. D., *Assistant Roentgenologist.*

Stanley J. G. Nowak, M. D., *Assistant in Surgical Research.*

J. William Burke, M. D., *Resident Surgeon, Out-Patient Department.*

Robert Aldrich, M. D., *Resident Surgeon, Fifth Surgical Service.*

James C. Callahan, M. D., *Resident Surgeon, Sixth Surgical Service.*

Morton S. Stern, M. D., *Resident Physician, First Medical Service.*

Israel Kopp, M. D., *Resident Physician, Third Medical Service.*

Norman W. Elton, M. D., *Resident Physician, Fifth Medical Service.*

Maurice Ingall, M. D., *Resident Physician, Pediatric Service.*

Anthony E. Peters, M. D., *Resident Physician, X-Ray Service.*

Merrill Moore, M. D., *Resident Physician, Neurological Service.*

Walter Wegner, M. D., *Resident Physician, Neurosurgical Service.*

#### SOUTH DEPARTMENT.

Morris Prizer, M. D., *Assistant Physician.*

Samuel H. Segool, M. D., *Assistant Physician.*

Pembroke N. MacDermott, M. D., *Assistant Physician.*







